Syntactic development in the second language acquisition of French by instructed English learners

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Abstract

This thesis seeks to empirically examine six contemporary theories of language acquisition by considering the acquisition of French word order by instructed English speaking learners.

French and English differ in terms of surface word order with respect to negation, adverbs and object clitics. These differences are shown in the table below.

Structure	French	English
S-V-Neg-X	elle ne regarde pas la télé	*she watches not TV
S-aux-Neg-V-X	*elle n'est pas regarder la télé	she is not watching TV
S-Neg-V-X	*elle ne pas regarde la télé	*she not watches TV
S-V-Adv-X	elle regarde souvent la télé	* she watches often TV
S-Adv-V-X	*elle souvent regarde la télé	she often watches TV
S-Cl/Pro-V	elle la regarde	*she it watches
S-V-Cl/Pro	*elle regarde la	she watches it

Table 1: Word order differences between French and English

Pollock (1989) argues that these different word orders are due to one single parametric difference between the two languages - namely verb placement. Negation, adverbs and clitics are in fixed positions in the underlying structure. In French the verb undergoes movement whereas in English it does not. The difference between the two languages is argued to be the result of French having a strong uninterpretable Tense feature which requires verbs to move whereas English does not (Chomsky & Lasnik, 1995, Lasnik, 2007). The learnability issue for the English speaking L2 learner of French is acquiring this different Tense feature.

In this thesis I will investigate the acquisition of these structures (negation, adverbs and object clitics) and will also consider the use of subject clitics to investigate potential parameter re-setting. This study seeks to empirically test between three theories of the Initial State of L2 acquisition and three theories of L2 development. The Initial State theories tested are Minimal Trees/Organic

Grammar (Vainikka & Young-Scholten, 1996, 2005), Full Transfer/Full Access (Schwartz & Sprouse, 1996) and Modulated Structure Building (Hawkins, 2001). These three theories all make different empirically testable predictions about the level of L1 transfer and the underlying structure of the Initial State. The theories of development tested are the Missing Surface Inflection Hypothesis (Prévost & White, 2000), Representational Deficit Hypothesis (Hawkins & Chan, 1997) and Feature Reassembly (Lardiere, 2008). Again these theories make different predictions concerning possible parameter re-setting in L2 French. This study is therefore framed by the following research questions:

A. What is the initial state in L2 learners of French?

B. How do functional features develop in these learners?

C. What is the role of the L1 feature settings in this development?

I examine data from five groups of 15 instructed English speaking learners of French who have all been taught in the British school and university system. The beginner group (aged 12-13) has received one year of instruction, the low-intermediate group (aged 15-16) have had four years, the high-intermediate (aged 17-18) have received 6 years of instruction. The low-advanced group (aged 19-20) are in their second year of an undergraduate French degree and the high-advanced group (aged 21-23) are in their final year of undergraduate study and spent at least 5 months in a French speaking country. Ten native speaker controls were also tested.

Results from two elicited oral production tasks, a comprehension task and an acceptability judgement task are presented and the theories of the Initial State and development mentioned above are evaluated in light of these results. The results show significant levels of L1 transfer in the Initial State and a gradual development of sentence structure. I argue that these results provide evidence against Full Transfer/Full Access and Organic Grammar and in support of Modulated Structure Building. In terms of development there are significant correlations between the use of verb raising with negation, adverb placement,

object clitics and subject clitics for both the oral production task and the judgement task. This would support the view that parameter re-setting is possible supporting Feature Reassembly and counter Representational Deficit Hypothesis. There is also partial support for the Missing Surface Inflection Hypothesis but further research is required.

This thesis concludes that parameter re-setting is possible for instructed English speaking learners of French. However, learners build their syntactic representation gradually and transfer their knowledge of English at each stage before re-setting the parameter to the French values.

Acknowledgements

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Contents

List of Figures

List of Tables

Chapter 1

Introduction

In the United Kingdom, French remains the most commonly taught second language in secondary schools (aged 11-18) and universities. In 2008 over 99% of secondary schools offered French (CILT, 2008). French presents some persistent challenges for English learners, particularly in terms of word order. The acquisition of a second language (L2) which differs from the first language (L1) in terms of its syntax (word order) has led researchers to ask whether the same innate mechanisms that constrain first language acquisition (Chomsky, 1965, 1981) are still available to the second language learner (Bley-Vroman, 1983, Dulay et al., 1982). Working within the framework of Universal Grammar (Chomsky, 1965, 1981), developments in the theory of syntax (for example Bošković and Lasnik, 2007, Chomsky, 1986, 1993) have allowed L2 researchers to make explicit theories for L2 acquisition of syntax. The goal of this study is to empirically test several different theories of L2 acquisition. These theories make different predictions relating to:

- what the second language learner possesses at the outset of the L2 acquisition process (i.e. What is the Initial State of L2 acquisition?),
- how the L2 learner's word order develops/changes, and
- the role of the first language (L1) in L2 acquisition (i.e. Does the learner

transfer from the L1 into the L2, if so what elements transfer and does this transfer persist?).

In order to test between different theories of L2 acquisition, I will consider cross-sectional data from the acquisition of French by 5 groups of instructed L1 English learners.

French and English differ in terms of their word order in respect to negation, adverbs and object clitic pronouns. These differences are highlighted in table 1 and are based on the target sentence given in example 1.1 below.

(1.1) *elle (ne) regarde pas souvent la télé.*
she (*NEG*) watches not often the TV
'She doesn't often watch TV.'

Structure	French	English
S-V-Neg-X	elle (ne) regarde pas la télé	*she watches not TV
S-aux-Neg-V-X	*elle (n')est pas regardant la télé	she is not watching TV
S-Neg-V-X	*elle (ne) pas regarde la télé	*she not watches TV
S-V-Adv-X	elle regarde souvent la télé	* she watches often TV
S-Adv-V-X	*elle souvent regarde la télé	she often watches TV
S-V-X-Adv	elle regarde la télé souvent	she watches TV often
S-Cl/Pro-V	elle la regarde	*she it watches
S-V-Cl/Pro	*elle regarde la	she watches it

Table 1.1: Word order differences between French and English

There has been a long-standing tradition of enquiry into the syntax of these two languages (see for example Emonds, 1978, Kayne, 1975, Lasnik, 2007, Pollock, 1989). In chapter 2 I discuss claims that the surface word order differences which are shown in table 1.1 can be accounted for under a single parametric difference in verb placement (Pollock, 1989). French and English share the same underlying sentence structure as shown in figure 1.1. The parametric difference between French and English is argued to be the result of the verb moving from VP (verb phrase) to IP (inflection phrase) in French but not in English.

The syntactic analysis of verb movement has undergone considerable revision in the last fifteen years with the advent of the Minimalist program (Bošković and Lasnik, 2007, Chomsky and Lasnik, 1995). As much of the second language

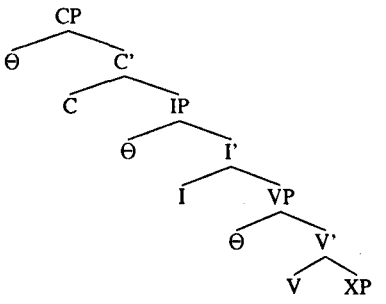


Figure 1.1: Basic underlying sentence structure

acquisition (SLA) literature on French was conceived within the previous Government & Binding (or Principles & Parameters) model (Chomsky, 1981, 1986), I will trace the argument for verb movement through work in this model by Pollock (1989) and subsequent revisions to Pollock's account. I will then consider the impact of Minimalism on the underlying syntactic analysis and what this means for English learners of L2 French. In chapter 2 I will also review syntactic theories of negation, adverbs, object clitics and subject clitics as these are crucial to the verb movement account and are subject to considerable debate. The implications of some alternative theories of negation, adverbs, object clitics and subject clitics are also discussed in terms of what that might mean for an English speaking L2 learner of French.

Previous studies on French L2 have considered some of the structures relating to verb movement. Hawkins et al. (1993) tested 104 intermediate-advanced English speaking learners of French on the acquisition of negation and the adverb 'souvent' (always)[1]. The authors argued that apparent French word order effects were the result of L1 transfer and construction by construction learning rather than being the result of parameter re-setting. In a series of papers White (1989, 1991a, 1992) examined beginner-intermediate English learners of French and French learners of English. She found persistent L1 effects in the judgement and production results for adverb placement. More recently, Ayoun

[1]Hawkins et al. (1993) also looked at the quantifier 'tous'.

(1999) tested 83 English speaking intermediate-advanced learners of French on negation and adverb placement in both a production and a judgement task. She found evidence for parameter re-setting in production results but not in the judgement results. Ayoun argues that as the native speakers in her study also show similar discrepancies between tasks, her results are suggestive of a large task effect. Herschensohn (2004) examines the acquisition of object clitics by two intermediate-advanced anglophone learners of French. She argues that these learners go through several stages in their acquisition of object clitics but the learners are ultimately successful in parameter re-setting. These diverse results suggest that the question of parameter re-setting in L2 acquisition remains a contested topic.

In this thesis I will investigate a range of structures given in table 1 (negation, adverbs and object clitics) and will also consider the use of subject clitics to investigate potential re-setting of the verb movement parameter within the Minimalist framework. Considering these four structures together will allow examination of possible clustering effects between structures which are acquired comparatively unproblematically (e.g. negation) and those which show persistent L1 transfer effects (e.g. adverbs). If the different structures cluster together then it would support the idea of parameter re-setting. If the structures do not cluster, then it would suggest that learners are learning the structures on an item by item (or construction by construction) basis. This would suggest they are not constrained by the same innate mechanisms as in L1 acquisition, i.e. they cannot re-set the parameter.This study seeks to empirically test between three theories of the Initial State of L2 acquisition and three theories of L2 development.[2] The Initial State theories tested are Minimal Trees/Organic Grammar (Vainikka and Young-Scholten, 1996, 2005), Full Transfer/Full Access (Schwartz and Sprouse, 1996) and Modulated Structure Building (Hawkins, 2001a). These three theories all assume different amounts of L1 transfer and argue for different approaches to the nature of the Initial State. The theories of development

[2] I have used the terms 'theory' and 'hypothesis' interchangeably throughout this thesis.

tested are the Missing Surface Inflection Hypothesis (Prévost and White, 2000), Representational Deficit Hypothesis (Hawkins and Chan, 1997) and Feature Reassembly (Lardiere, 2008). These theories make different predictions about whether parameter re-setting is possible and how it might be achieved. Each of these theories will be reviewed in turn in chapter 3. After reviewing each theory and the studies supporting/criticizing it, I will present the predictions each of the theories make for English learners of French.

Chapter 4 details the rationale underpinning this study, outlines my research questions and discusses in greater depth the predictions made by each of the theories outlined in chapter 3. I give specific examples of the data required to support or contradict each of the theories tested. I then discuss the participants in the study, including the rationale behind their inclusion. Five groups of 15 learners and a group of 10 native speaker controls are tested in this study. These learners represent the range of instruction available in the UK - from beginners starting their second year of secondary school instruction to final year university undergraduates. Background information on the makeup of each of the groups, including the hours of instruction for the school aged learners are also given. I next turn to the specifics of the methodology used to collect data from the learners. The experimental test battery consists of two elicited oral production tasks (one for negation and adverbs, another for object clitics), a comprehension task and an acceptability judgement task. A vocabulary measure was also administered as a pre-test. I discuss the rationale behind the decision to include each of these measures and how they inform on each of the target structures (negation, adverbs, object and subject clitics).

In chapter 5 I give the results of all the tests administered. I first present the pre-test results before turning to each of the experimental structures. I present the results for each structure across all of the groups and across the different tasks. That is, I present the results for the oral production task, then the comprehension task and finally the acceptability judgement task. I conclude the section on each structure by comparing how learners performed across the

tasks and summarizing the principle findings for each group. The results for negation are given, then adverbs, then object clitics and finally subject clitics. Finally, I compare target-like verb movement across the different structure to examine whether there is evidence of a cluster of properties suggesting parameter re-setting or if the structures are acquired individually.

In chapter 6 the results presented in chapter 5 are analyzed in terms of the predictions made by each of the theories presented in chapters 3 & 4. I discuss each theory's predictions in turn and examine all the data in light of each prediction. I first consider the three Initial State theories in respect to the results from the beginner group before summing up as to which theory's predictions are best supported by the data. I then turn to the theories of development and consider the data from all the groups and all the tasks in light of their predictions. I then again summarize which theory's predictions are best supported by the results. I also discuss what the results presented in chapter 5 mean for the syntactic theories, specifically the concept of the parameter and the theory of adverbs, outlined in chapter 2.

The final chapter (chapter 7) considers the limitations of this study and factors which may have influenced its outcome, including possible effects of instruction and the data collection methods used. In this chapter I reach conclusions about the role of the L1 in L2 acquisition, including the nature of the Initial State and L2 development.

Chapter 2

The structure of French and English: verb raising and IP

2.1 Introduction

The empirical study of the second language acquisition of French word order, which forms the heart of this thesis, is situated within a Chomskyan framework of Universal Grammar (Chomsky, 1959, 1965, 1981, 1995). In this chapter I will give some background on the Universal Grammar (henceforth UG) approach before turning to how it deals with the surface word order differences between French and English to be examined in this empirical study. The syntactic theory underpinning the analysis of French and English word order has undergone several important and quite radical revisions from Principle and Parameters theory (Chomsky, 1986, 1991) to Minimalism (Bošković and Lasnik, 2007, Chomsky and Lasnik, 1995). Therefore, in this chapter, I will trace some of these key developments and highlight their implications for the acquisition of French as a second language. The chapter is organized as follows: the remaining part of this introduction will outline the basic premise of UG, the second section will outline some of the basic word order differences between French

and English and discuss the most prominent proposal to account for this data (The Split-IP Hypothesis). I will review some criticisms and refinements of the Split-IP hypothesis before turning to how these word order differences can be accounted for under Minimalism (section 2.3). As will be discussed in section 2, the basis for the Split IP hypothesis comes from word order in relation to negation and adverbs. Therefore the final sections of this chapter will be devoted to a more fine-grained analysis of negation and adverb placement. I will also link the different use of pronouns to the analysis given for negation and adverb placement and suggest that these structures can also provide evidence for the analysis of the Split IP hypothesis.

2.1.1 Universal Grammar

UG attempts to explain how (first) language is represented in the mind as located in the human brain (Chomsky, 1965). Chomsky (1959, 1981, 1986) argues that language is species-specific, i.e. only acquired by humans and posits a "language faculty" that was part of the "biological endowment of the species" (Chomsky, 2002: 1). Chomsky (2002: 5) identifies two basic questions running throughout the UG literature which characterizes the aims of the UG approach.

i What constitutes knowledge of language?

ii How is such knowledge acquired?

These questions have to address three principle issues. Firstly, language is a very rich and complex system and a speaker of a particular language, despite differing input from other speakers of that particular language, will converge on the same internal representation. Secondly, each speaker will be able to produce sentences that he/she has never heard before. Therefore language is creative and not just imitative. Thirdly, a speaker of a particular language knows what is not possible in that language without ever having been explicitly taught. These three issues can also be termed "the poverty of the stimulus" (Chomsky, 1981, 2002). These considerations have lead Chomsky to posit that certain

fundamentals or principles of language must be innate (Chomsky, 1986). This means that humans are biologically pre-determined to learn language and that languages must share certain principles or universals of language. Individual languages vary according to a finite number of parameters. Cook and Newson summarize this as follows:

> UG is a theory of knowledge, not of behaviour; its concern is with the internal structure of the human mind. The nature of this knowledge is inseparable from the problem of how it is acquired; a proposal for the nature of language knowledge necessitates an explanation of how such knowledge came into being. UG theory holds that the speaker knows a set of principles that apply to all languages, and parameters that vary within clearly defined limits from one language to another. Acquiring a language means learning how these principles apply to a particular language and which value is appropriate for each parameter. (Cook and Newson, 1996: 2)

These parameters account for the differences between languages and can be, for example, phonological or syntactic. An interesting question for researchers interested in second language acquisition has been if/ to what extent the principles and parameters of UG are still available to second language learners. Several different theoretical approaches to this in terms of syntax have been suggested and will be reviewed in the next chapter and tested as part of the empirical study into the acquisition of French by English speaking learners, presented in the second half of this thesis.

UG posits an underlying hierarchical phrase structure for syntax as shown in Figure 2.1.

This underlying phrase structure is divided into lexical and functional categories.[1] Lexical categories "provide the descriptive content and the basic argument (thematic) structure [whereas] functional [categories] determine the config-

[1]This distinction between lexical and functional categories is important for some of the theories of acquisition that will be outlined in the next chapter and tested in the study to be presented.

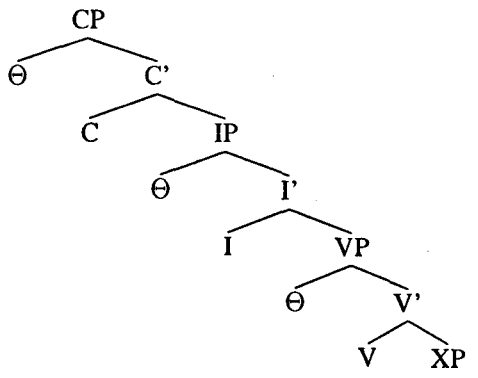


Figure 2.1: Basic underlying sentence structure

urational geometry and provide such grammatical specifications as tense, mood, definiteness, etc." (Belletti and Rizzi, 1996: 3). Kornfilt (1989: 151) argues functional categories do not have semantic content and are a closed class associated with the Complementizer Phrase or CP (questions, embedded clauses), the Inflectional Phrase or IP (tense and agreement) and the Determiner Phrase DP (articles). As will be discussed in the next section, the differences in word order between English and French examined in this study are claimed to lie in the IP domain and therefore the subsequent sections will concentrate solely on IP.

2.2 The Split IP hypothesis

French and English exhibit different word order patterns in sentences with negation or an adverb. This is shown below (examples from Pollock, 1989: 367).

(2.1) *Jean embrasse souvent Marie.* *(S-V-Adv-O)*
Jean kisses often Marie.
'*John kisses often Marie'

(2.2) *John often kisses Mary.* *(S-Adv-V-O)*
John souvent embrasse Mary
'*Jean souvent embrasse Marie'

(2.3) *Jean (n') aime pas Marie. (S-V-Neg-O)*
Jean NEG likes not Marie
'*John likes not Marie'

(2.4) *John does not like Marie. (S-Neg-V-O)*
John do-support pas aime Marie
'*Jean pas aime Marie'

As can be clearly seen from these examples, the grammatical Subject-Verb-Adverb-Object order in French is ungrammatical in English and vice versa. The same holds for negation.[2] In order to account for these differences and furthering work by Emonds (1978) and Kayne (1975), Pollock (1989) proposed that English and French have different parameter settings in terms of verb placement.

The dichotomy given in 2.1 to 2.4 can be accounted for by claiming that negation and adverbs remain in the same position and the verb is in a different position, i.e. verb movement or verb raising. In French the verb moves/raises from VP over the adverb or negation to IP whereas in English it does not. However, as Pollock points out, in English the verbs *have* and *be* do raise over negation and adverbs. The is shown in examples 2.5-2.7 below (Pollock, 1989: 368). For an English speaking learner of French, this means that he/she would have to establish that in French all verbs must raise.

(2.5) John is not happy.

(2.6) *John does not be happy.

(2.7) John has seldom enough money. [3]

In the pre-Minimalist terminology IP is marked for Tense and Agreement. According to Pollock in French Tense is defined as strong. Pollock argues for a link between the strength of Tense (IP) and inflectional morphology. French as a rich morphological paradigm with many verb forms having distinct endings.

[2]English negation is complicated by the existence of do-support. It has not been glossed as it has no semantic content. See the section on negation for further details.

[3]*John seldom has enough money* is also a grammatical sentence. Pollock raises the question of why lexical *have* seems to permit optional movement. He accounts for why it can move in terms of its θ-grid (i.e. it's argument structure) but does not account for why it does not have to move.

English does not. Pollock argues that strong Tense and the rich morphological paradigm allows θ role (i.e argument structure) assignment and all lexical verbs obligatorily raise in finite sentences. This is supported by the ungrammaticality of French sentences given in 2.2 and 2.4 above in which the finite verb has not raised (Pollock, 1989: 385). However, as in English verbs do not raise with the exception of *have* and *be* (see examples 2.5-2.7 above), he argues this is because Tense (IP) is weak in English, i.e. not morphologically rich enough, for lexical verbs which assign a θ role. Verbs cannot therefore move to Tense. Pollock argues that *have* and *be* can raise to IP in English as they do not assign a θ-role.

> "One way of executing this idea is to say that when [IP] is [weak], the θ grid of V cannot percolate up to [IP]. As a consequence, the 'foot' of that chain, the trace of the amalgamated Agr[eement]+V, has no θ grid to assign, thereby causing a θ-Criterion violation" (Pollock, 1989: 386)[4]

Pollock argues that this dichotomy between raising and not raising to IP needs to be further refined. He argues for a split-IP analysis by examining the position of verbs in non-finite clauses, (examples from Pollock, 1989: 377-8).

(2.8) *À peine parler l'italien après cinq ans d' étude...*
hardly to-speak Italian after five years of study...
'To hardly speak Italian after five years of study...'

In example 2.8 the adverb *à peine* is to the left of the non-finite verb. This supports the (independent) analysis that adverbs are generated in a VP-initial position as shown in the tree in figure 2.2 below and do not undergo movement.

However, the grammaticality of example 2.9 with the non-finite verb appearing before the adverb, leads Pollock to posit that the adverb is still in a fixed position but the non-finite verb is undergoing some form of verb movement. However, he argues that this cannot be full movement to IP as 2.10 and 2.11

[4]Chomsky (1981: 36) defines the θ-criterion as "Each argument bears one and only one θ-role and each θ-role is assigned to one and only one argument."

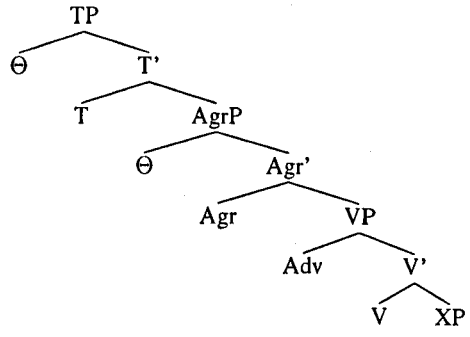


Figure 2.2: Split IP tree with Adverb

demonstrate that the non-finite verb cannot move over negation, which he proposes to be a separate projection between IP and VP (examples from Pollock, 1989: 374).

(2.9) *Parler à peine l'italien après cinq ans d' étude.*
to-speak hardly Italian after five years of study.
'To hardly speak Italian after five years of study...'

(2.10) *Ne pas sembler heureux est une condition pour écrire*
Ne not to-seem happy is a prerequisite for to-write
des romans.
some novels
'To not seem happy is a prerequisite for writing novels.'

(2.11) **Ne sembler pas heureux est une condition pour écrire*
Ne to-seem not happy is a prerequisite for to-write
des romans.
some novels

Pollock resolves this by suggesting that "it must be a Verb movement rule, different from Verb Movement to [IP], moving the non-finite verb to some intermediate position before the negative adverb *pas*" (Pollock, 1989: 379). This leads Pollock to suggest that IP be split into its two component parts, Tense and Agreement . He also assumes that Agr(eement) "is a category in its own right, to be distinguished from Tense, which is the head of what has so far been called [IP]. We might more appropriately call the latter T(ense) and its maximal projection TP" (Pollock, 1989: 383). Therefore, non-finite verb movement

would be short movement to AgrP whereas in French finite sentences, the verb moves to TP.

However, both *être* (to be) and *avoir* (to have) are able to move to TP in non-finite sentences as the examples given in 2.12-2.15 show. Pollock suggests that this is for the same reason as English allowing verb-raising of *have* and *be* (now considered as movement to TP) as neither verb assigns a θ role (examples from Pollock, 1989: 373).

(2.12) *Ne pas être heureux est une condition pour écrire des romans.*
Ne not to-be happy is a prerequisite for to-write some novels.
'Being unhappy is a prerequisite for writing novels'

(2.13) *N' être pas heureux est une condition pour écrire des romans.*
Ne to-be not happy is a prerequisite for to-write some novels.

(2.14) *Ne pas avoir de voiture en banlieue rend la vie difficile.*
Ne not to-have a car in the-suburbs make the life difficult
'Not having a car in the suburbs makes life difficult'

(2.15) *N' avoir pas de voiture en banlieue rend la vie difficile.*
Ne to-have not a car in the-suburbs makes the life difficult.

English also has short verb movement (or movement to AgrP), as can be shown by the grammaticality of 2.16 and 2.18. However, this seems to be restricted to *have* and *be* as shown by the ungrammaticality of 2.17 and 2.19. These examples are from Pollock (1989: 382).

(2.16) Peter is said to have seldom enough money.[5]

(2.17) *Peter is said to make seldom enough money.

[5]This may only be acceptable/grammatical in British English according to Pollock (1989: 382).

(2.18) John is said to be seldom on time for his appointments.

(2.19) *John is said to arrive seldom on time at his appointments.

Pollock argues that there exists a dichotomy between the two languages. In English both short verb movement (movement to Agr) and verb movement to TP is lexically restricted to *have* and *be*. French does not have any restrictions on lexical verb movement to TP in finite sentences or movement to Agr in non-finite sentence. Pollock believes that this motivates a two-step approach to verb movement - the first to Agr and then to Tense. This is shown in figure 2.3 below.[6]

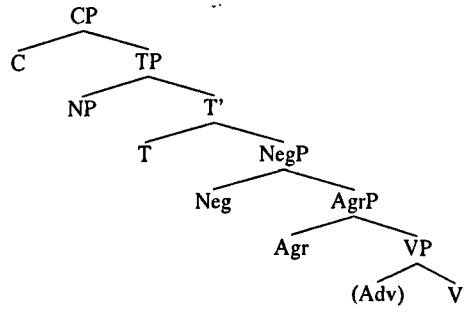


Figure 2.3: Pollock (1989: 397)

Pollock's analysis has generated considerable discussion within the literature. His account has been subject to criticism, for example Iatriadou (1990), Williams (1994), and revision, for example Belletti (1990), Chomsky and Lasnik (1995) and Pollock (1997) and a re-analysis in terms of features under the Minimalist Program, (for example Hegarty, 2005, Lasnik, 2007). This in turn has also been subject to criticism, (Vainikka, 2009). The next section will briefly outline the arguments of two critics of the original Split-IP hypothesis before turning to several important revisions leading up to the Minimalist re-analysis.

[6]Pollock does not include the specifiers of CP, NegP, AgrP or VP in his tree for ease of reading.

2.2.1 Criticism of Split IP hypothesis

Iatriadou (1990) argues that "evidence for the existence of the maximal projection that Pollock called 'AgrP' is not as strong as it might appear at first" (Iatriadou, 1990: 551). She argues that infinitives in English do not move to an independent AgrP but that auxiliary verbs in English (*have* and *be*) are "independent lexical items [and this] strongly suggests that they head their own maximal projections" (Iatriadou, 1990: 555), in other words another VP. She provides evidence by considering the sentences given in 2.20-2.23 (examples taken from Iatriadou, 1990: 555).

(2.20) John is believed to frequently have criticized Bill.

(2.21) John is believed to have frequently criticized Bill.

(2.22) John is believed to frequently be criticizing Bill.

(2.23) John is believed to be frequently criticizing Bill.

In both these sets of examples, *have* or *be* can appear on either side of the adverb *frequently.* Iatriadou argues that as there are two VPs in these sentences, each "can have a VP-peripheral adverb position ... and both of them can be filled simultaneously" (Iatriadou, 1990: 557). The tree given in figure 2.4 illustrates this structure.

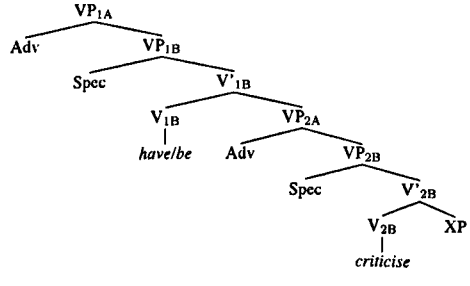


Figure 2.4: (Iatriadou, 1990: 556; ex. 10b)

This analysis is not compatible with the idea that the non-auxiliary uses of *have* and *be* undergo short verb movement (or movement to AgrP) in non-finite clauses as there would only be one VP and therefore only one adverb

position (Spec VP). Iatriadou uses the examples given in 2.24-2.27 from Pollock (1989: 382) to argue against movement to AgrP for non-auxiliary uses of *have, be*(Iatriadou, 1990: 558-560).

(2.24) I believe John to often be sarcastic.

(2.25) I believe John to be often sarcastic.

(2.26) *I believe John to sound often sarcastic.

(2.27) I believe John to often sound sarcastic.

Iatriadou argues that in cases like this the reason for the ungrammaticality of (26) is not due to verb raising but rather semantics. For this example, she argues that the ungrammaticality "arises from a semantic incompatibility between the verb *(sound)* and the reading of the lower predicate *(often sarcastic)* imposed by the adverb" (Iatriadou, 1990: 560). She illustrates this point with other examples (see below) to show that such sentences are only grammatical if the adverb+adjective "are semantically compatible and can form a constituent" (Iatriadou, 1990: 559)

(2.28) I believe John to deliberately be sarcastic.

(2.29) I believe John to be deliberately sarcastic.

(2.30) *I believe John to clumsily/ tolerably be sarcastic.

(2.31) I believe John to be clumsily/ tolerable sarcastic.

(2.32) I believe John to regularly be sarcastic.

(2.33) ??I believe John to be regularly sarcastic.

Iatriadou highlights two different proposals that would also account for Pollock's French data. She refers to arguments by Di Sciullo and Williams (1987) and Travis (1988). Di Sciullo and Williams (1987) suggest that Italian and French share the structure given in figure 2.5. Under their analysis the [V Adv]

order comes from the morphological component, i.e. rich morphological languages specify that adverbs appear after the verb whereas non-morphologically rich languages do not. This would account for Verb-Adverb word orders without requiring verb movement. This would appear to be a parametric difference between languages.

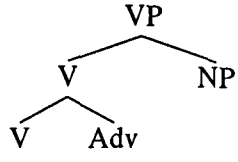


Figure 2.5: Di Sciullo and Williams (1987: 101)

Iatriadou suggests that Travis (1988) might also account for the French data. She states that according to Travis "some adverbs are heads without a maximal projection and can be sisters to the verb. This would imply that *comprendre à peine* in [2.35] is some sort of complex verb" (Iatriadou, 1990: 562).

(2.34) *À peine comprendre l'italien...*
hardly to-understand italian

(2.35) *Comprendre à peine l'italien...*
to-understand hardly italian

Iatriadou does not endorse either of these accounts and does not go into any more detail than presented here, but uses them to illustrate the point that there are alternative explanations to Verb Movement (Iatriadou, 1990: 563).

Williams (1994) also argues against Verb Movement to account for the surface differences between French and English. He argues that Pollock's proposal of a single parameter based on the strength of Agr is not consistent with his account. Williams argues that Pollock's proposal rests on three parameters, not one as Pollock suggests. Using the examples given below in 2.36-2.38 (Williams, 1994: 190), he argues that to explain the ungrammaticality of 2.36 "Pollock is required to postulate that English (but not French) has a null auxiliary verb which moves from a VP-adjoined position to IP (and whose movement is not blocked by *not*, giving ungrammaticality)" (Williams, 1994: 190-1). As French

does not have a do-support type feature, Williams argues that this is a second parametric difference between the two languages. Williams suggests a third difference is required to account for examples 2.37 and 2.38. He argues that the auxiliary in 2.37 and the main verb in 2.38 are both in I. Therefore the ungrammaticality of 2.38 is due to a parametric different between English and French in terms of whether adverbs may precede a tensed verb (Williams, 1994: 191).

(2.36) *John not left.

(2.37) John recently was talking to Bill.

(2.38) *Jean récemment parlait à Pierre

Williams also argues that the apparent movement can be explained by sub-categorization; "sub-categorization by classes, as in the case of adverbs, and by individual lexical items, as in the case of negation" (Williams, 1994: 191). Williams suggests that there are three types of negation in English: negative adverbs, e.g. *never*, negative auxiliaries, e.g. *wouldn't* and the word *not*, which "is a free form in syntax, appearances and assumptions notwithstanding" (Williams, 1994: 194). Williams argues that *not* takes an optional XP complement in English, but that in French *pas* in some cases patterns "like English *not* [but] in the other function, it is an adverb, like English *seldom*" (Williams, 1994: 200). Williams concludes that lexical insertion rules are sufficient to account for the word order difference between French and English (Williams, 1994: 204).

These two ideas perhaps do not have the explanatory appeal of the Split-IP hypothesis as they rely on individual rules for negation and for adverbs and do not have the clustering effect of the verb movement parameter. If correct, however, this would suggest that English learners of French will have to learn the rules for individual structures and we would not expect to find any clustering of these structures. More prominent perhaps are the revisions made to the Split IP Hypothesis and in the next section some of these will be outlined.

2.2.2 Revision of the Split IP Hypothesis

Using evidence from Italian, Belletti (1990) suggests a revision rather than a rejection of Pollock's theory. She agrees that IP should be split but argues that Agr should appear above Tense instead of below it as per Pollock (1989). She bases her work on Baker's (1985) Mirror Principle, which claims that verbal affixes attach in the order in which they move up the tree. Therefore in Italian, as shown in example 2.39, (taken from Belletti, 1990: 28), the Tense affix cliticizes to the stem before the agreement clitic.

(2.39) *Legg -eva -no*
read -imperfect -3ppl
'they read' (order of affixes: T, imperfect; Agr, 3 person plural)

Belletti follows Pollock (1989) in assuming that negation is a maximal projection and appears between AgrP and TP and that "there is no specific process of adverb movment, the order 'inflected Verb...negative adverb' can only be arrived at through V to Agr movement" (Belletti, 1990: 29). Her approach yields the following structure for IP.

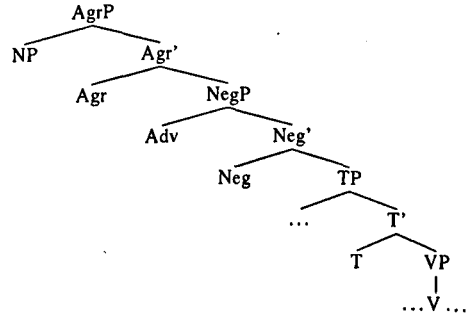


Figure 2.6: Belletti (1990: 30)

In a subsequent article Pollock (1997) addresses some of the issues raised by these challenges to his 1989 account. He addresses two main areas, which he identifies as (Pollock, 1997: 253f):

- motivation for [±] strong inflection, and
- Inflection lowering affix hopping in English tensed sentences with lexical

verbs.

Pollock argues that developments in syntactic theory (Checking Theory[7]) suggest that verbs do not enter the tree/derivation as bare forms and then move through AgrP and TP to get agreement or tense but rather verbs are inserted into derivation in a form fully inflected for person, number, gender, mood, etc. and check their features against those in AgrP and TP (Chomsky, 1993). This, therefore, alleviates the need for inflection lowering in English tensed sentences.[8] He states:

> Within a system of this type the French-type languages are languages where α [inflected verb] adjoins to I before "spell-out" (that is, where Verb raising is a D-structure/S-structure operation in a GB-type theory) while in English-type languages it does so after "spell-out", that is, covertly at LF [Logical Form] (Pollock, 1997: 256).

He argues that Checking theory provides support for his ordering of Tense above Agreement rather than Belletti's Agreement above Tense. The example given below in 2.40 yields the structure in 2.41. Under checking theory morphology is checked from the end or outside first, i.e. *-ons* in (40) would be checked before *-er* (Pollock, 1997: 257). Due to the Head Movement Constraint[9], this would mean Belletti's structure would not be possible.

(2.40) [[[$_{\text{Root}}$ parl]-er $_{\text{Tense/Mood}}$]-ons $_{\text{Agr}}$]

(2.41) [$_{\text{TP}}$ NP T[$_{\text{AgrP}}$ AGR[$_{\text{VP}}$ α]]]

[7]Checking Theory applies to uninterpretable features. Adger (2003: 85) summarizes Checking Theory as follows:

- The Checking Requirement: Uninterpretable features must be checked, and once checked, they can delete.
- Checking under Sisterhood: An uninterpretable feature F on a syntactic object Y is checked when Y is sister to another syntactic object Z which bears a matching feature F.

[8]We will consider these developments in greater detail in the section on Minimalism.

[9]Head Movement Constraint (Radford, 2004: 193) Movement from one head position to another is only possible between a given head and the closest head which asymmetrically c-commands it (i.e. between a given head and the next highest head in the structure containing it).

One of the criticisms Pollock identified with his account was why the strength of inflection would motivate verb raising. In Pollock (1989), he argues that in English only auxiliaries could move to Tense as they do not have a θ-grid. In this 1997 paper, Pollock modifies this by claiming that there is a projection higher than TP that he called MoodP [10].

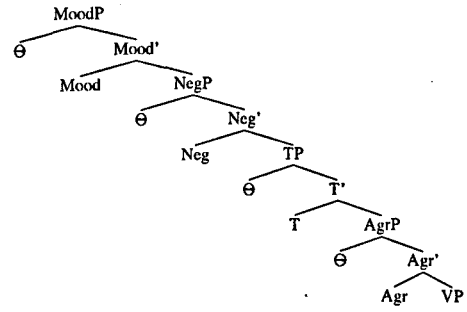


Figure 2.7: adapted from Pollock (1997: 262)

He argues that English does not allow lexical verbs to raise because lexical verbs do not have different inflections for mood, i.e. subjunctive versus indicative whereas auxiliaries do (Pollock, 1997: 260-1). Older varieties of English had different inflections for mood and also verb raising[11]. He says:

> Loss of overt main verb raising to the pre-negative functional position is a consequence of the loss of morphologically manifested mood distinctions between the indicative and the subjunctive (Pollock, 1997: 262).

Under this analysis the link between agreement morphology and [± strong] parameter settings is made. Pollock argues that "only morphologically identified ('strong') functional heads can be checked overtly [i.e. be raised]" (Pollock,

[10] Pollock does not specifically explain why he moves NegP to above TP in this tree.

[11] Using examples from Murakami (2002), Pollock argues that lexical verbs in Middle and Old English could move to a pre-NegP position in both subjunctives and imperatives and this died out at the same time as the subjective was no longer morphologically marked (Pollock, 1997: 261-2)

i I am not to advertise my reader that he impute not to them the faultes of their ancestours (1571, Campion, The History of Ireland)

ii Fear you not my part of the dialogue. (Shakespeare, Much ado about nothing)

1997: 265). A morpheme is 'morphologically identified' if it "alternates unambiguously...with at least one distinct morpheme of the same inflectional category" (Pollock, 1997: 265). For example, French, unlike English has regular productive paradigms for present, future and conditional as shown in 2.42-2.44 below (taken from Pollock, 1997: 274, fn 21).

(2.42) [[[[Root parl] -∅ Mood] -∅ T] -ons AGR] (present)

(2.43) [[[[Root parl] -er Mood] -∅ T] -ons AGR] (future)

(2.44) [[[[Root parl] -er Mood] -i T] -ons AGR] (conditional)

Following initial work by Chomsky (1989), Chomsky and Lasnik (1995) argue that the different positions of AgrP in Pollock (1989, 1997) and Belletti (1990) can be reconciled. They suggest that there are "two Agr elements in IP, each a collection of ϕ-features, one involved in subject agreement and subject Case, the other in object agreement and object Case" (Chomsky and Lasnik, 1995: 59). These elements have become known as AgrSP and AgrOP as shown in the tree diagram (figure 2.8) below. The authors do not posit a NegP projection in this tree but state "embedded in this structure there might be a phrase headed by the functional element *Negation*, or perhaps more broadly, a category that includes an affirmation marker and others as well" (Chomsky and Lasnik, 1995: 60).

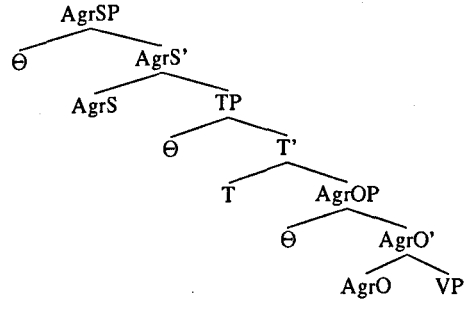


Figure 2.8: Chomsky and Lasnik (1995: 60)

So far the discussion of the differences in word order with negation and adverbs between French and English has centered on a parametric difference

between the strength of Tense allowing verb raising in French and disallowing verb raising in English (with lexical verbs). Under this analysis the task for the English speaking L2 learner of French would be to re-set the parameter from weak to strong.

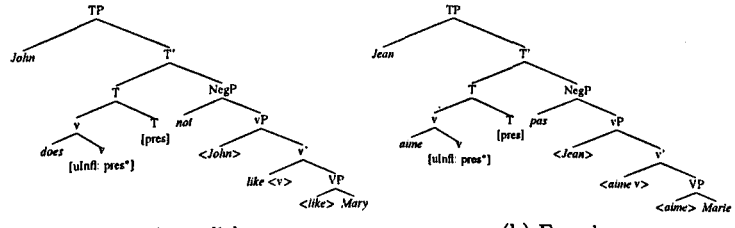
The work by Chomsky (1995) and Chomsky and Lasnik (1995) spearheaded a new movement in syntactic theory known as the Minimalist Program or Minimalism. This arose partly from a perceived need to streamline the number of parameters proposed under the previous Government & Binding (or Principles & Parameters) model (see Chomsky (1993) for discussion). The effects of Minimalism on the comparative analysis of French and English has been far-reaching in how it characterizes the differences between these two languages. In the next section, I will briefly outline how Minimalism deals with the verb raising and how this may impact on L2 learners of French. As will be shown, the task for the English speaking L2 learner of French may be slightly different to re-setting a parameter from weak to strong.

2.2.3 Verb raising and Minimalism

The Minimalist Program or approach to linguistics (henceforth Minimalism) as initiated by Chomsky (1993, 1995) is an attempt to reduce the complexity of Principles & Parameters theory. The drive behind the program is to eliminate any redundancy in the linguistic system and instead of focusing on descriptive adequacy (i.e. how to account for different phenomena in different languages) concentrate on explanatory adequacy, i.e. how would a child acquire language (Chomsky, 2002: 96). There are several important differences between the syntactic theory presented in the first part of this chapter and Minimalism. While features (such as person, number, tense etc) were present under Principles & Parameters they are given greater prominence under Minimalism. Variation between languages is conceived as being variation in feature strength or combinations of features, known as feature bundles which define functional categories (Liceras et al. (2008: 2), Travis (2008: 22)). Operations within Minimalism are

restricted to MOVE, MERGE and AGREE.[12]

Under a minimalist view, all verbs come from the lexicon with fully inflected/ specified features for person, number, tense etc, i.e. all the endings are already in place. Differences in verb placement between French and English are no longer seen as a difference in whether the verb raises or not but rather whether the features on a verb (like tense, number, person etc.) are checked overtly (before LF/PF) or covertly (after Spell Out at LF/PF). This gives rise to the tree structures underlying English (2.9a) and French (2.9b)[13][14]:



(a) English (b) French

Figure 2.9: Underlying structure of French and English in Minimalism (Adger, 2003)

Lasnik (2007) summarizes this position as follows (Lasnik, 2007: 265):

i In French the V-features of Agr (i.e. those that check features of a V) are strong.

ii In English, the V-features of Agr are weak.

iii V-features are not legitimate PF objects.

iv Strong features are visible at PF; weak features are not.

v Surviving strong features cause the derivation to crash at PF.

In other words, as French has strong features, all of the features on the verb must be checked (and therefore deleted) before the derivation (sentence) is sent

[12]For further introduction to Minimalism see Radford (2004) or Adger (2003) for an overview.

[13]In the most recent versions of the Minimalist Program (for example Bošković and Lasnik, 2007) the agreement projections, AgrS and AgrO, are no longer present but instead are considered as agreement features on lexical items

[14]Square brackets [ ] indicate features and angled brackets ⟨ ⟩ indicate the copy of a moved or merged element.

to PF. If the strong French features are not checked, then the derivation will crash causing an ungrammatical sentence. In English, all the features on the verb are weak so they cannot be checked before PF[15], therefore they will only be checked after the derivation has been sent to PF. The task for English L2 learners of French is to realize that in French features must be checked before they are sent to LF/PF (i.e. overtly before Spell out).

The problem on this account still remains in the analysis of *have* and *be*, as in English they can and do raise. In a similar vein to Pollock (1989), Chomsky (1993) suggests that these auxiliaries are "semantically vacuous, hence not visible to LF operations" (Lasnik, 2007: 265). As they are not visible at LF, their features cannot be checked covertly (i.e. at LF/PF) and therefore they must be checked overtly, i.e. before LF/PF, in the same way as French verbs are checked, giving rise to verb raising. However, as Lasnik (2007) points out, *be* is not always 'semantically vacuous' as it can have the meaning of 'exists' as shown in the example below and it does raise over negation (or check its features overtly). Examples 2.45-2.46 are taken from Lasnik (2007: 265, ex.7-8).

(2.45) There is/exists a solution.

(2.46) There is not a solution.

Radford (2004) argues that English retains a remnant of verb raising from older varieties of English (see previous discussion). He argues that in English, Tense (TP) doesn't have a strong uninterpretable Tense feature like in French but rather has a strong uninterpretable AUX (auxiliary) feature. For Radford an auxiliary is an umbrella term for auxiliaries, modals and copula *be*. He argues

> If the closest verb head c-commanded by T is an auxiliary, the affix attracts it; but if the closest verbal head c-commanded by T is a main verb, the affix is instead lowered onto the main verb in the PF component by Affix Hopping. (Radford, 2004: 168)

[15]The Procrastinate Principle is argued to prevent English verbs being checked overtly. According to Lasnik (2007: 265) Procrastinate can be defined as "Delay an operation until LF whenever possible, that is, whenever delaying would not cause the derivation to crash".

Lasnik (2007) suggests a possible solution to explain the distribution of auxiliary and lexical verbs in French and English. He suggests that all verbs in French and *have* and *be* in English are fully inflected/ specified for features in the lexicon but crucially that all other English verbs are not, i.e. they are bare verb forms (Lasnik, 2007: 266). Under this account, the idea of strong or weak features as a distinguishing characteristic of French and English is no longer necessary. All features associated with IP in French and English are strong[16]. As the bare English verbs do not have any features to check overtly in the syntax, they will not raise. Under Lasnik's analysis the difference between French and English lies in the nature of IP, not in terms of whether it has strong or weak features but whether I(nflection) is "an affix or a set of abstract features" (Lasnik, 2007: 266). French only has features in I(P), whereas English can have both features and affixes - features on *have, be* and affixes for all other (bare) verbs (Lasnik, 2007: 268). The insertion of affixes (like past tense -ed) is a "morphophonemic [rule] rather than a syntactic one" (Lasnik, 2007: 267). In other words, affixes will merge with the bare verb at PF.

If Lasnik's approach is on the right lines, then the task for the English L2 learner of French is not a case of changing a parametric setting from weak to strong but rather specifying all verbs for features in the lexicon and disallowing PF affix merger. In other words, the L2 learner of French has to realize that French only has features in IP and that these features are checked overtly (i.e. before LF/PF).

Pollock's account of verb raising (and others that follow from it) relies on two important assumptions: firstly that adverbs are in fixed positions cross-linguistically and are not subject to movement and secondly that negation heads its own maximal projection. Both these topics have in themselves received considerable attention in the literature, including support from Cinque (1999) on adverbs, criticism of Cinque's work from Vainikka (2009) and several works on negation including Zanuttini (1996, 1997) and Haegeman (1995). In the next

[16]See Lasnik (2007) for discussion of why Swedish has weak features.

section differing views on the syntax of adverbs will be discussed before turning to the syntax of negation. I will also outline how verb raising is also applicable to the analysis of clitic pronouns. It is these structures (adverbs, negation and clitics) which show the different word order between French and English and testing English speaking learners of L2 French on these items will form the basis of the empirical study to be reported in chapters 4-6.

2.3 Adverbs

In this section opposing views of adverbial syntax will be discussed. The first, proposed by Cinque (1999) argues for a fixed universal hierarchy of adverbs as the specifiers of functional projections and adverbs do not move unless under specific conditions. The second view expands upon this latter idea and argues for a semantically constrained approach to movement of other elements in the sentence (e.g. the object) within a hierarchy of fixed adverb positions (Laenzlinger, 2002). The third approach proposed by Vainikka (2009) argues against the first two claiming that adverbs are not base generated in a series of functional projections but rather adverbs originate from one of two positions and can and do move from their original position. These opposing views have important consequences for the theories of L2 development outlined in the next chapter. If there is a universal hierarchy of functional projections which project above VP then this underlying structure is the same in both French and English. If true, as Cinque (1999) and Laenzlinger (2002) claim, then adverb placement can provide evidence for the presence or absence of verb movement and the existence of functional categories. However, if adverbs can move then adverb placement may not provide evidence to the learner of verb movement.

2.3.1 Universal Hierarchy

Cinque (1999) argues that adverb phrases (AdvPs) are "unique specifiers of distinct maximal projections" and that there is a "fixed universal hierarchy of

clausal functional projections" (Cinque, 1999: v-vi). He suggests that adverbs fall into two main categories: "higher" or sentence adverbs and "lower" or VP adverbs (Cinque, 1999: 4-16). The lower adverbs can either be in a pre-VP position or they can appear "at the very end of the VP bearing the nuclear (or focus) stress" (Cinque, 1999: 16). Each group of adverbs, whether higher or lower, is in an ordered sequence. For example in French 'lower' adverbs like *complètement* must precede adverbs like *tout* and follow ones like *toujours* (Examples from Cinque, 1999: 7-8).

(2.47) *Jean a toujours complètement perdu la tête pour elle.*
John has always completely lost the head for her.

(2.48) **Jean a complètement toujours perdu la tête pour elle.*
John has completely always lost the head for her.

(2.49) *Il a complètement tout perdu.*
He has completely everything lost.

(2.50) **?Il a tout complètement perdu.*
He has everything completely lost.

In English 'higher' adverbs like *honestly* must precede adverbs like *(un)fortunately.* These in turn must precede ones like *evidently* as shown in the examples below taken from Cinque (1999: 33).

(2.51) Honestly I am unfortunately unable to help you.

(2.52) * Unfortunately I am honestly unable to help you.

(2.53) Fortunately, he had evidently had his own opinion on the matter.

(2.54) * Evidently he had fortunately had his own opinion on the matter.

This ordered sequence or hierarchy of adverb positions can be summarized in the tables below which represent each of the 'higher' and 'lower' classes of adverbs with French and English examples. The hierarchy extends down the table, i.e. speech act adverbs precede evaluative etc.

Cinque argues that while lower adverbs may appear in a post-VP focus position, this is not the result of them being generated there, but rather as they

Type of adverb	French example	English example
speech act	franchement	honestly
evaluative	heureusement	unfortunately
evidential	évidemment	evidently
epistemic	probablement	probably
tense adverb	maintenant	once
irrealis	peut-être	(almost) certainly
subject-oriented	intelligentement	wisely

Table 2.1: Higher Adverbs (adapted from Cinque, 1999: 33, 76)

Type of adverb	French example	English example (page34)
habitual	géneralement	usually
tense (anterior)	déjà	already
terminative	plus	no longer
perfect	toujours	always
completive	complètement	completely
voice	tout	well

Table 2.2: Lower Adverbs (adapted from Cinque, 1999: 34, 76)

have focus, other elements (i.e. the verb and its complements) have moved to a higher position (Cinque, 1999: 22). He also notes that some adverbs/adverbials, for example, those of time, place or manner, seem to be generated within the VP and allow a free/unordered sequence. These, however, are mainly realized with prepositions or as bare nouns (e.g. for three days, tomorrow) and therefore Cinque argues that these are not AdvPs (Cinque, 1999: 28). Cinque's argument is that adverbs are in a fixed position in all languages and surface word order variations are the result of other elements of the sentence (e.g. the verb, the object) having moved. I will return to the issue of adverbs in final position in a later section as this will be crucial to understanding the interlanguage of some of the learners tested.

Cinque suggests that, abstracting away from agreement and negation[17], there is also a fixed universal hierarchy of functional heads (e.g. Mood, Tense, Aspect). He demonstrates this universality by providing examples from a wide

[17]Cinque suggests that negation (NegP) may be subject to parametric variation (Cinque, 1999: 136-7) and in the next section I will discuss the possibility of multiple NegP projections.

variety of language types including Indo-European languages (e.g. Italian, Welsh), Finno-Ugric (e.g. Hungarian), Altaic (e.g. Korean, Evenki) and Creoles (e.g. Guyanese creole) to name but a few (see Cinque, 1999: 153-165 for further details). In the weak version of his hypothesis languages select relevant heads from this hierarchy. In the stronger version, which Cinque tentatively supports, all these functional heads are available in all languages (Cinque, 1999: 76).[18] His hierarchy is shown below (Cinque, 1999: 76) where Mod stands for 'modal', T for 'tense' and Asp for 'aspect':

(2.55) $\text{Mood}_{\text{speech act}} \rightarrow \text{Mood}_{\text{evaluative}} \rightarrow \text{Mood}_{\text{evidential}} \rightarrow \text{Mod}_{\text{epistemic}} \rightarrow \text{T(past)}$
$\rightarrow \text{T(future)} \rightarrow \text{Mood}_{\text{irrealis}} \rightarrow \text{Asp}_{\text{habitual}} \rightarrow \text{T(anterior)} \rightarrow \text{Asp}_{\text{perfect}} \rightarrow$
$\text{Asp}_{\text{retrospective}} \rightarrow \text{Asp}_{\text{durative}} \rightarrow \text{Asp}_{\text{progressive}} \rightarrow \text{Mod}_{\text{root}} \rightarrow \text{Voice} \rightarrow$
$\text{Asp}_{\text{celerative}} \rightarrow \text{Asp}_{\text{completive}} \rightarrow \text{Asp}_{\text{(semel)repetitive}} \rightarrow \text{Asp}_{\text{iterative}}$

Cinque claims that there is a link between the hierarchy of adverbs (as shown in the tables 2.1 & 2.2 for 'higher' and 'lower' adverbs) and the hierarchy of functional heads given in 2.55. Indeed, he argues that there is a one-to-one specifier-head relation between each functional head and each class of adverb (Cinque, 1999: 77). Table 2.3 shows the English AdvPs in the specifier position of each functional head which projects above VP.

In summary, Cinque argues that adverbs head their own maximal projections (AdvPs), which occupy the specifier positions of functional categories associated with IP, such as Mood, Tense and Aspect. These functional categories are exploded into separate, semantically distinct heads (e.g. habitual, continuative) and each AdvP has a one-to-one relationship with the corresponding functional head. For example, a habitual adverb like *usually* will be in the specifier of the functional head $\text{Asp}_{\text{habitual}}$. These functional projections are in fixed positions universally and adverbs do not move.

If Cinque's proposal is correct, then the task for the English L2 learner of French in terms of the acquisition of adverbs is clear. The two language

[18] Cinque suggests that this may make the acquisition task easier as it is "the least costly option" (Cinque, 1999: 127). However, see the discussion of Vainikka (2009) for an opposing view.

AdvP in Spec	Functional Head
frankly	$Mood_{speech\ act}$
fortunately	$Mood_{evaluative}$
allegedly	$Mood_{evidential}$
probably	$Mod_{epistemic}$
once	T(past)
then	T(future)
perhaps	$Mood_{irrealis}$
necessarily	$Mood_{necessity}$
possibly	$Mood_{possibility}$
usually	$Asp_{habitual}$
again	$Asp_{repetitive\ I}$
often	$Asp_{frequentative\ I}$
intentionally	$Mod_{volitional}$
quickly	$Asp_{celerative\ I}$
already	T(anterior)
no longer	$Asp_{terminative}$
still	$Asp_{continuative}$
always	$Asp_{perfect\ (?)}$
just	$Asp_{retrospective}$
soon	$Asp_{proximinative}$
briefly	$Asp_{durative}$
characteristically (?)	$Asp_{generic/progressive}$
almost	$Asp_{Prospective}$
completely	$Asp_{SgCompletive\ I}$
tutto	$Asp_{PlCompletive}$
well	Voice
fast/early	$Asp_{celerative\ II}$
again	$Asp_{repetitive\ II}$
often	$Asp_{frequentative\ II}$
completely	$Asp_{SgCompletive\ II}$

Table 2.3: Cinque's Universal Hierarchy (Cinque, 1999: 106)

share the same underlying adverb structure so evidence in the input of different positions in relation to the verb (i.e. the adverb coming before the verb as in English or after as in French) should only be analyzable as a difference in verb position as adverb movement is ruled out. The presence of adverbs in the learner data would mean that the learner was projecting functional categories associated with IP. Therefore, the presence of adverbs can be used to determine if the learner is raising the verb out of the VP or not.

Traditionally adverb positioning has been considered in terms of a minimal pair, in which the grammatical French order (SVAX) is ungrammatical in English and the grammatical English order (SAVX) is ungrammatical in French. For example:

(2.56) *Jean regarde souvent la télé. (SVAX)*
Jean watches often the TV
'*John watched often TV'

(2.57) **Jean souvent regarde la télé. (SAVX)*
Jean often watches the TV
'John often watches TV'

However, both languages also permit alternate adverb orders, for example, adverbs appearing at the end of the sentence. The next section concentrates on the analysis of these sentences within a fixed hierarchical structure before turning to an alternate theory proposed by Vainikka (2009).

2.3.2 Adverbs in final position

As previously mentioned, Cinque (1999) argues that adverbs that appear post-verbally in a sentence final 'position' are not generated there but other elements of the phrase are moved to higher positions in the tree in a movement similar to scrambling[19] (Cinque, 1999: 22). Cinque argues that certain adverbs can also appear in a sentence final position if they are stressed and frequently accompanied by a slight pause (Cinque, 1999: 12). This is known as right-dislocation. Rowlett (2007: 111) provides the following French examples of both these phenomenon. Example 2.58 shows a scrambled object and example 2.59 shows right-dislocation.[20]

[19]Scrambling is an optional syntactic movement which accounts for 'free word order' in languages such as Japanese, Dutch and German. Scrambling can either be considered as A(rgument)-movement or A' (non-argument) movement. "A-movement is a local operation that moves a phrasal expression into a Case position (e.g. the Specifier of the Inflectional Phrase..). The target position of an A'-movement is a Caseless position such as the Specifer of a Complementizer Phrase (CP) or an adjunct position" (Karimi, 2003: xiii). Saito and Fukui (1998) and Bošković and Takahashi (1998) argue that in Minimalist terms scrambling can be seen as the result of Merge.

[20]For some native speakers of French, this sentence with *toujours* is ungrammatical. If *souvent (often)* is substituted then it is acceptable. This will be further discussed in light of Laenzlinger (2000, 2002).

(2.58) *Certains quartiers sont [complétement sous les eaux]$_i$*
some neighbourhoods are completely under the water
toujours t$_i$.
still
'Some neighbourhoods are completely under the water still.'

(2.59) *Jean ne voyage pas en train, ordinairement.*
Jean NEG travels not on train ordinarily
'J. doesn't travel by train ordinarily'

Using Italian to support his argument, Cinque claims that most of the 'lower' adverbs can appear in this post-complement sentence final position but that higher adverbs and habitual adverbs cannot occur in this position unless they are 'de-accented' (Cinque, 1999: 14). One exception is 'speech-time' adverbs as they are classed as higher adverbs but they can appear in this sentence final position, e.g. 'now' and 'then' (Cinque, 1999: 15). Cinque proposed that even in this position adverbs still maintain the hierarchy as set out above although 'de-accented' material can intervene. He suggests the following structure for the position of adverbs in a sentence (Cinque, 1999: 16) and claims that French works in the same way.

(2.60) "Higher" (sentence) AdvPs → "Lower" AdvPs → (DP_{subj} (V)
complements → Place, time, manner, etc. adverbials → (focused)
"Lower" AdvPs → de-accented material.

Rowlett (2007) extends the French examples of Cinque's hierarchy as shown in table 2.4.

As Cinque (1999) proposes that all projections from $Asp_{habitual}$ and below belong to the 'lower' adverb class then all these associated adverbs could potentially surface in a sentence-final position, i.e. objects could scramble over them or they could be right-dislocated. Using Rowlett's French version this would also give sentences like the following:

(2.61) **Elle lave le chien encore.*
she washes the dog again
'She washes the dog again'

Functional head	specifier
$Mood_{Speech\ act}$	franchement
$Mood_{evaluative}$	heureusement
$Mood_{evidential}$	évidemment
$Mod_{epistemic}$	probablement, sans doute
T(past)	maintenant
$Mood_{irrealis}$	peut-être
FP	intelligement
$Asp_{habitual}$	généralement, normalement, d'habitude, ordinairement
FP	pas
T(anterior)	déjà, encore
FP	soudain, tout à coup, brusquement, peu à peu
$Asp_{terminative}$	plus, encore
$Asp_{continuative}$	toujours, jamais
FP	guère
$Asp_{retrospective/proximinative}$	tout à l'heure
$Asp_{PlCompletive}$	complètement, partiellement, entièrement, en partie
FP	tout, rien
Voice	bien, mal

Table 2.4: Amended Universal Hierarchy(Rowlett, 2007)

(2.62) *Elle lave le chien brusquement.*
she washes the dog suddenly
'?She washes the dog suddenly'

(2.63) *Elle lave le chien entièrement.*
she washes the dog entirely
'?She washes the dog entirely'

(2.64) **Elle lave le chien mal.*
she washes the dog badly
'She washes the dog badly'

(2.65) **?Elle lave le chien toujours.*
she washes the dog always
'*She washes the dog always'

As the judgements beside these sentences show, not all are grammatical in French or English and the two languages do not necessarily agree on the judgements, for example *mal* is not acceptable in sentence final position whereas

badly is acceptable.

Laenzlinger (2002) compares the distribution of adverbs in French, German and English. Laenzlinger tries to account for the different adverb positions as exemplified in 2.66 & 2.67 below (Laenzlinger, 2002: 67):

(2.66) *(Amicalement,)* *Jean* *(,amicalement,)* *a* *(amicalement)* *salué*
(friendly) Jean (friendly) has (friendly) greeted
(amicalement) *le* *professeur* *(amicalement).*
(friendly) the professor (friendly)
'Jean friendly greeted the professor.'

(2.67) *(*Déjà,)* *Jean* *(*déjà)* *a* *(déjà)* *salué* *(??déjà)* *le*
(already) Jean (already) has (already) greeted (already) the
professeur *(*déjà).*
professor (already)
'John has already greeted the professor'.

Laenzlinger suggests that this different distribution can be accounted for by considering the semantics of the adverbs in question. He suggests *déjà* is a quantificational adverb whereas *amicalement* is a qualificational (circumstantial) adverb (Laenzlinger, 2002: 67-68). This semantic distinction is important as based on his 1998, 2000 work, Laenzlinger (2002) argues that the Cinque (1999) Universal Hierarchy can be collapsed into the following (semantically motivated) schema (Laenzlinger, 2002: 72).

(2.68) Mood → Mode → Tense → $\text{Aspect}_{\text{high}}$ → $\text{Aspect}_{\text{low}}$ → v → V

If there are multiple adverbs of the same type in a sentence, the full hierarchy can be incorporated into these different categories as shown in table 2.5:[21]

In terms of adverbs appearing in sentence-final position, Laenzlinger argues that Mood and Mode adverbs cannot appear in this order unless parenthetically (i.e. right dislocation) as shown in the examples 2.69-2.72. Examples 2.73-2.74 demonstrate the impossibility of light adverbs (e.g. bien) or low-aspectual adverbs (e.g. beaucoup) appearing in this position, even in a right-dislocated sentence. This leaves high-aspectual adverbs, such as manner adverbs or time

[21] The F1, F2, F3 etc show the hierarchical order of functional features within each category.

MoodP	ModeP	AspP(high)	AspP(low)
F1=speech act	F1=epistemic	F1=habitual	F1=perfect(I)
F2=evaluative	F2=irrealisis	F2=repetitive	F2=continuative
F3=evidential	F3=necessity	F3=frequentative	F3=perfect(II)
	F4=possibility	F4=celerative	F4=retrospective
		F5=volitional	F5=proximative
			F6=durative
			F7=generic/ progressive
			F8=prospective
			F9=completive
			etc.

Table 2.5: Features associated with functional heads (Laenzlinger, 2002: 72)

adverbs, as the only grammatical adverbs in this position as shown in examples 2.75-2.77 (Examples from Laenzlinger, 2002: 93-94).

(2.69) *Jean n'a pas lu la Bible, heureusement.*
Jean neg-has not read the Bible fortunately
'Jean did not read the Bible, fortunately.'

(2.70) **Jean n'a pas lu la Bible heureusement.*
Jean neg-has not read the Bible fortunately
'*Jean did not read the Bible fortunately.'

(2.71) *Jean a lu la Bible, probablement.*
Jean has read the Bible probably
'Jean has read the Bible, probably'.

(2.72) **Jean a lu la Bible probablement.*
Jean has read the Bible probably
'*Jean has read the Bible probably'.

(2.73) **Jean a lu la Bible(,) beaucoup.*
Jean has read the Bible much
'Jean read the Bible a lot'.

(2.74) **Jean a embrassé Marie(,) bien.*
Jean has kissed Marie well
'Jean kissed Marie well'.

(2.75) *Jean a lu un livre récemment.*
Jean has read a book recently

'Jean read a book recently'.

(2.76) *Jean a lu la Bible souvent.*
Jean has read the Bible often
'Jean read the Bible often.'

(2.77) *Jean a embrassé Marie tendrement.*
Jean has kissed Marie tenderly
'Jean kissed Marie tenderly'.

Laenzlinger argues that this word order can be accounted for by low-object scrambling[22], i.e. the object has scrambled over the adverb, which is in its fixed position in Spec, ObjP. This is shown in the figure below.

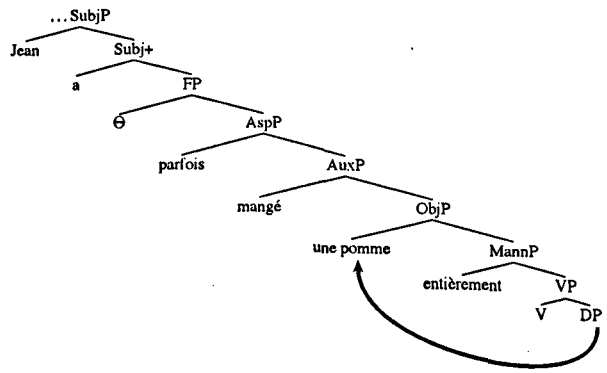


Figure 2.10: Low-object scrambling, (Laenzlinger, 2002: 96)

Laenzlinger concludes:

> "When adverbs occur [finally in a sentence] in French, their distribution interacts with that of complements. The various positions of adverbs with respect to objects are derived from transformations like object extraction from VP ... Thus, high adverbs can surface on the right of low adverbs, since their respective scope properties can be recovered by reconstruction." (Laenzlinger, 2002: 103)

This account differs from that of Cinque's (1999) argument and Rowlett's (2007) examples that all 'lower-order' adverbs can appear sentence finally. Un-

[22]Low-object scrambling is so-called to contrast with scrambling in languages such as German, where the object can be scrambled to CP. This is not possible in French or English. See also footnote 18

der this analysis only some of the lower order adverbs can appear in this position. Under this analysis, Rowlett's example (2.58 repeated again here as 2.78) using *toujours* (always) would be ungrammatical, which seems to be in line with many native speakers judgements (however, see footnote 18).

(2.78) **Certains quartiers sont [complétement sous les eaux]$_i$*
some neighbourhoods are completely under the water
toujours t$_i$.
always
'Some neighbourhoods are completely under the water still.'

Under Laenzlinger's account, English and French both appear to work in the same way with respect to adverbs in the sentence final space. However, as the translation of one of his own examples shows, this is not always the case, as shown in the example with *bien* given in 2.74, repeated here in 2.79:

(2.79) **Jean a embrassé Marie bien.*
Jean has kissed Marie well
'Jean kissed Marie well'.

The French example is ungrammatical whereas the English version is acceptable, both without a right-dislocated reading. Under a fixed universal hierarchy account of adverb distribution, this appears problematic and I know of no syntactic analysis to account for these cross-linguistic differences.[23] Vainikka (2009) has an alternate account of adverbial syntax involving adverb movement, which will be outlined in the next section, and she also accounts for why certain adverbs can appear finally and not others. However, this account is restricted to English and has not been applied yet to French.[24]

[23]Care has been taken in the selection of adverbs used in testing the L2ers to chose adverbs which project between VP and the lowest TP and exclude all light adverbs. However, the inclusion of the adverb *encore (again)* possibly muddied the analysis as *again* can appear sentence finally (i.e. after an object or similar) in English but not in French. Further details of the adverbs selected for testing and the problems with *encore (again)* will be discussed in the Methodology and Results chapters.

[24]Vainikka and Young-Scholten (2009) consider the adverb placement of French speaking L2 learners of English and raise the possibility that French adverbs may "occupy different syntactic positions" from English ones (Vainikka and Young-Scholten, 2009: 63) but argue this is unlikely. As this 2009 paper deals with L2 acquisition, the focus is not on providing an account of adverb placement in French but rather why French learners of L2 English permit order such as *He reads frequently books.* Therefore, the implication of Vainikka and Young-Scholten (2009) is that French and English adverbs work in the same way but this is not made explicit.

Setting this issue to one side, if Laenzlinger is correct, then the task for the English speaking L2 learner of French is the similar to Cinque's account given above although simplified by the grouping of the functional projections into four categories (Mood, Mod, high and low Aspect). However, for sentence final adverbs, the L2er must acquire the semantic distinctions of the different adverbs in order to map them to the appropriate category (for example, high or low Aspect) in order to constrain which adverbs can appear sentence finally. This moves part of the acquisition of verb raising and word order into the interface with semantics.

2.3.3 Adverb movement account

As mentioned in the previous section, Vainikka (2009) has an alternate account of adverb placement in English. Vainikka's work represents an alternative to Minimalism but still within a UG framework. This alternative, proposed by Vainikka and Young-Scholten (2005, 2007), is known as Organic Syntax and rooted in their work on acquisition (Organic Grammar, to be reviewed in the next chapter).The basic assumptions behind Organic Syntax are as follows (Vainikka and Young-Scholten, 2007: 3-7):

1. Each language has a Master Tree that includes all possible projections occurring in the language.

2. All and only those projections occur in the Master Tree for which there is evidence in the language.

3. Universal Grammar provides the tools for acquiring the Master Tree, based on input.

4. The Master Tree is acquired from the bottom up.

5. The Acquisition-Syntax Correspondence (Vainikka, 2003): syntax mirrors acquisition.

6. Actual instantiations of the tree are projected from the bottom up, based on the Master Tree.

7. Partial trees may be projected for constructions which do not involve the full Master Tree structure.

8. Lexical and functional projections differ in terms of how they are represented in the grammar.

9. Cross-categorial generalizations about structure are possible.

10. Only as much adjunction is posited as necessary.

Vainikka's account is radically different to those put forward by Cinque (1999) and Laenzlinger (2000, 2002) as she does not argue that adverbs are in a fixed universal hierarchy but rather are grouped into several categories which can undergo different amounts of movement. In line with Belletti (1990), outlined above, Vainikka assumes that AgrP is above TP in a split-IP although Vainikka supports this from L1 acquisition studies (for example Brown, 1973) showing that Tense (past tense morphology) is acquired before Agreement (3rd person singular -s). She also assumes that modals are base generated in TP and move to AgrP and that negation heads its own maximal projection (NegP), which is optional (i.e. only present in negative sentences) and below TP and above VP. Vainikka also argues for distinct projections to house passive morphology (VoiceP), progressive morphology *(ing)* (ProgrP) and past tense morphology *(ed)* (AspP). These latter three projections are all "double" projections with heads for both the auxiliary and the morphological suffix. This gives the following order (adapted from Vainikka, 2009: 5, Table 1):

(2.80) AgrP → TP → (NegP) → AspP → ProgrP → Voice P → VP

These lower projections (AspP, ProgrP and VoiceP) are all optional and only projected in relevant sentences. In these double projections, the lower specifier position is an A' position and the higher one an A position. This means that adverbs will be able to move to the lower specifer A' positions. An example of

how this tree would look is given below with different possibilities for adverb placement as shown in the sentence below:

(2.81) This book must (immediately) have (immediately) been (immediately) reviewed (immediately).

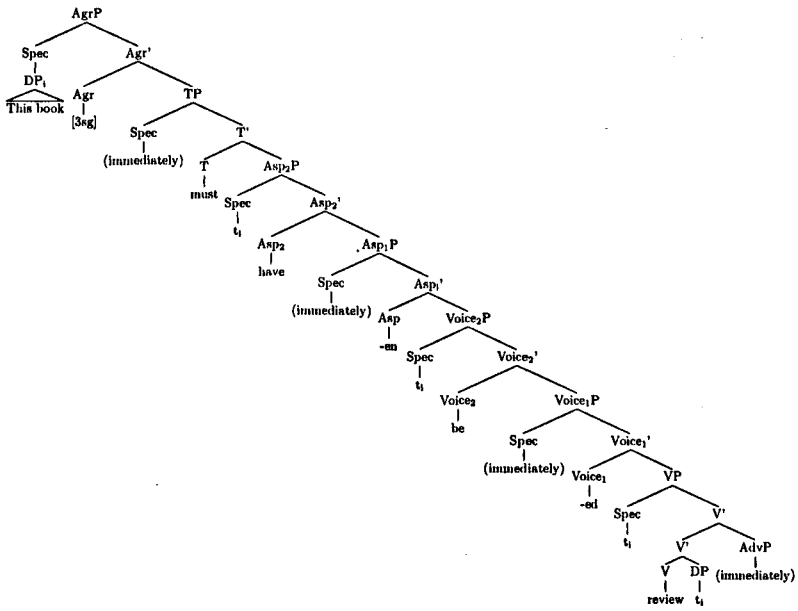


Figure 2.11: (Vainikka, 2009: 17, ex. 14)

Vainikka argues there are three basic positions for adverbs in English: at the beginning of the sentence, (i.e. before the subject), at the end of the sentence (i.e. after the verb and any objects) and centrally (i.e. between the subject and the main verb), (Vainikka, 2009: 8) These central positions can be broken down as follows (Vainikka, 2009: 10):

(2.82) I often watch TV (between subject and main verb)

(2.83) I have often watched TV (between auxiliary and main verb)

(2.84) I often have watched TV (between subject and auxiliary)

(2.85) I should often have watched TV (between two auxiliaries)

According to Vainikka, the adverbs fall into 7 distinct classes. They are either base generated in the VP (as shown in the tree above) and move from

VP to the A' specifier positions of any of the functional projections mentioned above (AspP, ProgrP, VoiceP) or they are base generated in Spec TP and this thus accounts for the differing adverb placement. The third option (example 84) is difficult to account for as there is no specifier position between the subject and finite verb. In order to address this and following her assumption that auxiliaries are base generated in T, she argues that exceptionally auxiliaries can remain in T and not raise to Agr thus allowing the adverb to be in spec TP (an A' position) and the morphological affix lowers from Agr to T in the same way as affix-hopping with main verbs. The classes of adverbs Vainikka identifies can be summarized as follows (Vainikka, 2009: 13-23):

- Class 1: adverbs are always in the VP and cannot move. They are similar to adjuncts or arguments of the verb. Examples include *well.*
- Class 2: degree and manner adverbs base generated in the VP (like Class 1) but allow movement to the lowest available A' position. Examples include *completely.*
- Class 3: time and frequency adverbs. Similar to Class 1 and 2 but these adverbs permit movement to Spec TP. Examples include *frequently.*
- Class 4: subject-orientated adverbs. These are also base generated in VP but can move to sentence initial CP positions. For example, *reluctantly.*
- Class 5: IP related adverbs. These adverbs are not base generated in VP but in TP. They cannot move. For example *simply, merely.*
- Class 6: sentential adverbs. These are similar to Class 5 adverbs but they can move higher to CP. Examples include *probably, evidently.*
- Class 7: ambiguous adverbs. These can either be base generated in VP or Spec TP. For examples *frankly, specifically.*

If Vainikka's account of adverb movement is correct then it has important consequences for verb raising. She argues that adverb placement cannot be used as a test for verb raising if the adverb is generated in Spec TP as "if the finite verb has the option of only raising to T ... an adverb preceding the finite verb in Spec TP is ambiguous in terms of whether the verb has raised to T or remains in the VP" (Vainikka, 2009: 26). Therefore, according to this analysis, she argues the only adverbs which can be used to determine if verb raising occurs are those which can move out of the VP but not as far as TP, i.e. class 2 adverbs only. However, grouping of adverbs into these classes does not take into account the differences within the classes. Consider, for example, frequency adverbs. Both often and always are frequency adverbs and belong in group 3. Yet only 'often' can remain in VP whereas 'always' cannot. The only alternative suggestion would be to claim that 'always' is in class 5. In which case, it is difficult to know how a learner might assign classes if the semantics cannot be used as a indication. We would therefore expect to find many errors in adverb placement both in L1 and L2 acquisition.

(2.86) She watches TV often.

(2.87) *She watches TV always.

Given this account, the task for the English L2 learner of French is that in order to determine the position of the verb (i.e. raised or not) in sentences with adverbs the learner needs to identify whether adverbs are base generated in VP or Spec TP and the movement restrictions of the different classes. While Vainikka argues against the multiple functional categories of Cinque (1999) because they would make the acquisition process too difficult, in fact this analysis may actually make the acquisition task more demanding. Under Cinque's analysis all adverbs are in the same place cross-linguistically so when a learner hears a sentence in French with the order SVAX then the learner can deduce that the verb has moved. However, under Vainikka's analysis the learner hearing the same sentence must work out what type of adverb is used and if it has moved

before working out where the verb is, i.e. has it moved, if so how far (just to TP) or higher. This would be potentially more difficult as the learner has to sort out potentially two different move operations in order to determine the underlying sentence structure.

The different positions on adverb placement reviewed in this section have shown that the syntax of adverbs is still a matter for debate as is its role in verb placement. The data to be presented in later chapters of this study will be analyzed in terms of these three hypotheses. However, adverbs are not the only structure argued to support a verb raising account of the word order differences between French and English. In the rest of this chapter, I will discuss the theoretical arguments surrounding negation and show how a verb raising account has also been applied to the analysis of clitic pronouns.

2.4 Negation

The other structure used by Pollock (1989) to demonstrate verb raising is negation[25]. The claim is that in French all verbs (lexical and auxiliary) must raise over the negator whereas in English lexical verbs cannot raise (but auxiliaries can). This is shown in examples 2.88-2.93:

(2.88) *Marie ne regarde pas la télé.*
Marie neg watches not the TV.
'Marie doesn't watch TV'

(2.89) **Marie ne pas regarde la télé.*
Marie neg not watches the TV.

(2.90) *Marie n' a pas regardé la télé.*
Marie neg has not watched the TV.
'Marie has not watchedTV'

[25]There are two types of negation: sentential and constituent. Sentential negation negates the whole utterance whereas constituent negation negates only part of an utterance and often in contrast with another part of the utterance. For example,

1. Marie does not read newspapers. (sentential negation).
2. Marie reads no newspapers (just books). (constituent negation).

The focus of this section is on sentential negation as constituent negation will not inform about verb placement.

(2.91) Marie does not watch TV.

(2.92) *Marie watches not TV.

(2.93) Marie has not watched TV.

The task for the English learner of French is to establish that all verbs can appear before negation whereas in English only auxiliaries or 'dummy-do' can. Do-support is the insertion of the semantically empty 'do' before negation which carries Tense and Agreement features, as shown in example 2.91, and is triggered in the absence of an auxiliary or modal in IP.

As mentioned in the Split-IP section earlier, Pollock (1989) claimed that negation headed its own projection, NegP. In French negation is in two parts: *ne* and *pas*. The status of these two elements has been the subject of much discussion (for a review see Rowlett, 2007). Historically in French the only negative element required in a sentence was *ne* but this changed in early modern French to *ne* requiring another element, an adverb such as *pas*. In modern spoken French and in some non-formal written styles the *ne* is dropped and *pas* carries the force of negation (see Armstrong, 2002, Auger and Villeneuve, 2008, Coveney, 1998: for discussion). According to Zanuttini (1997: 12-17) French would be in stage 2 of Jespersen's cycle (Jespersen, 1917) with modern colloquial French moving towards stage 3.[26] I will return to this point later. In English there is only one negative element present in a simple negative sentence: *not/n't*.[27]. However, Zanuttini (1996) argues that in both French and English there are two types of negation. One is the head of the NegP but the other is a specifier (Zanuttini, 1996: 182). Zanuttini suggests that in French *ne* is the head of the NegP as it attaches to the verb like a clitic and moves to a higher position in the tree (see the next section on clitics for further details on

[26]According to Jespersen's cycle, Indo-European languages have evolved from having pre-verbal negation only (stage one, e.g. Italian, Spanish), to having both pre-verbal and post-verbal negation (stage two, e.g. French) and then finally stage three in which languages have only post-verbal negation (e.g. Piedmontese, possibly modern colloquial French).

[27]I am setting aside instances of double negation, e.g. She couldn't not have heard. But see discussion to follow on the status of n't and not using these kinds of sentences. I am also not considering the dialectal English negative concord option of "I don't know nothing" to mean "I don't know anything".

the diagnostics of clitics).[28] Under this analysis, *pas* would be in the Specifier position as shown in figure 2.12.[29] [30]

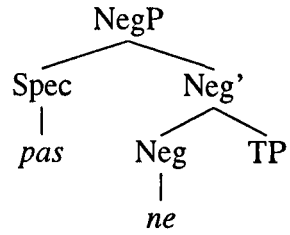


Figure 2.12: Structure of NegP (Zanuttini, 1996: 182)

Zanuttini argues for the same structure in English. Following Zwicky and Pullum (1983), she claims that *not* and *n't* are distinct morphemes. She argues that *not* is the same as *pas* and that *n't* is the head of the NegP. As it is a bound morpheme and *n't* only appears with auxiliaries and modals in TP, Zanuttini claims *n't* attaches to the verb as the verb (auxiliary or modal) raises past it. The examples given in 2.94-2.97 show the distinction between *n't* and *not*, the impossibility of *n't* appearing lower that TP and that *n't* cannot appear with a

[28]To foreshadow the subsequent discussion the tests to determine if something is a clitic established by Kayne (1975) include: 1. that it cannot be separated from the verb except by other clitics, 2. it cannot be stressed and 3. it cannot be modified and 4. it cannot be conjoined.

[29]Under Zanuttini's analysis NegP projects above TP.

[30]Zanuttini (1997) argues that cross-linguistically in Romance languages there is more than one NegP projection, in fact there could be up to four Zanuttini (1997: 99). To briefly summarize, she uses the data below to support the analysis that *plus* and *pas* are in structurally distinct positions with *plus* being lower than *pas* (Zanuttini, 1997: 84).

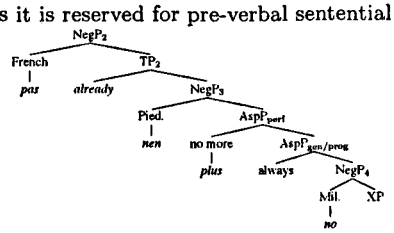
i Pierre dit ne *pas* **manger**.
Pierre says neg neg to-eat
'Pierre says not to eat'

ii *Pierre dit ne **manger** *pas*.

iii Pierre dit ne *plus* **manger**.
Pierre says neg no-more to-eat
'Pierre says not to eat anymore'

iv ?Pierre dit ne **manger** *plus*.

Using evidence from Piedmontese that *nen* is distinct from both French *pas* and *ne* and in Milanese *no* is below both French negators, she proposes the tree below. Neg-1 is not shown as it is reserved for pre-verbal sentential negation like in Spanish.



lexical verb (Zanuttini, 1996: 192-3).[31]

(2.94) She could [*not* have noticed it].

(2.95) She couldn't [*not* have noticed it].

(2.96) *She could [have*n't* noticed it].

(2.97) *Mary has always paid*n't* her taxes.

Another phenomenon in English is that of "do-support". In English negative sentences that do not have an auxiliary or modal present require the addition of "do" to carry the tense and agreement features instead of the main lexical verb:

(2.98) She does not pay taxes.

(2.99) *She does not pays taxes.

(2.100) *She not pays taxes.

Using a minimalist approach, Adger (2003: 192-193) argues that in non-negative sentences T and v form a chain as T checks Tense features with v.[32] As negation intervenes between TP and v, T can no longer c-command v and check its features. Adger calls this rule the "Pronouncing Tense Rule (PTR)". If the PTR is violated, for example in the case of negation, a last-resort rule of "do-support" applies.

On a surface level "do-suport" in English means that there must always be a finite verb (albeit a semantically empty one) before negation. The task for the English learner of French is to realize that in French all verbs must come before negation and that *pas* is the negative element which must be present. As will be shown in the discussion of my study's results, the requirement in English for

[31] See later discussion in footnote 36 on the status of *n't*.

[32] Chains are formed by Agree when the syntactic features of X are checked against and c-command Y (Adger, 2003: 192).

a verbal element before negation may in fact be crucial to account for the early acquisition of SVNegX order in French. [33]

As previously mentioned, French has two surface elements for negation and English has one. According to Jespersen (1917) English and French represent different stages of the cycle of negation. These stages are shown below with an expanded stage 2 (Rowlett, 1998, Zeijlstra, 2004):

Stage	Description	Language	Example
stage 1	single preverbal clitic	Old English	ic ne secge
stage 2	clitic & free morpheme	Middle English	I ne seye not
	bipartite negation	standard French	Je ne mange pas
	bipartite negation with optional clitic	spoken French	Je (ne) mange pas
stage 3	free morpheme	Early Modern English	I say not
stage 1'	free morpheme → clitic	Present day English	I do not say I don't say

Table 2.6: Jespersen's cycle adapted from Breitbarth and Haegeman (2008)

Breitbarth (2009) argues that the change between single pre-verbal negation at stage 1 and bipartite negation in stage 2 is that the clitic changes from being a sentential negation marker to expressing polarity leading to its elimination by stage 3. If modern French is at stage 2 and English is at stage 1' (i.e. having returned to a single morpheme/clitic to express negation having gone through the previous stages) then the English learner of French needs to establish that French requires a negator *pas* and a polarity marker *ne*.[34]

Rowlett (2007) argues that polarity is feature based, i.e. there is a feature [±NEG] that must be checked within IP with positive the default value (Rowlett, 2007: 147). Based on his earlier 1993, 1998 work, Rowlett (2006) argues that *pas* cannot originate as the specifier of the same NegP projection that has *ne* as its head.

[33]Benincà and Poletto (2004) argues that do-support also exists in some varieties of Romance. Using evidence from Monnese, a Lombard dialect from Northern Italy, they argue that *fa* (do) is used in a subset of the ways in which do-support is used in English, i.e. in questions and VP ellipsis but not in negation. As Monnese has overt verb raising to IP over negation and adverbs they analyze this as V to C movement and as a last resort strategy.

[34]Radford (2004: 470) defines a polarity item as "a word or a phrase (e.g. a word like *ever* or a phrase like *at all* or *care a damn*) which has an inherent affective polarity, and hence is restricted to occurring within the scope of an affective (e.g. negative, interrogative or conditional) constituent."

(2.101) *Défais le pas!*
undo-IMP that not
'Don't undo it!'

(2.102) **Ne défais le pas!*
NEG undo-IMP it not

(2.103) *Gênez vous pas!*
trouble-IMP you not
'Don't be embarassed!'

(2.104) *Ne gênez vous pas!*
NEG trouble-IMP you not

Using evidence from imperatives shown in examples 2.101-2.104, he argues that *pas* must originate lower in the clause than the NegP projection with *ne* as its head. *Pas* then can raise, but doesn't have to, to adjoin in spec position of NegP and *ne* cliticizing to the finite verb and raising with it to TP in finite sentences. The initial raising of *pas* gives it wide scope (i.e. negates the whole sentence) and licenses *ne*. Rowlett does not specify what this lower projection might be although he resists the idea of another NegP. It could be that it is an AdvP or some sort of polarity phrase.

Schapansky (2002) argues against the idea that *pas* licenses *ne*. She points out that in French *ne* can still appear on its own with a negative meaning. For example (taken from Rowlett, 2007: 151)

(2.105) *Je ne peux venir.*
I neg can come.
'I can't come'

(2.106) *Il ne cesse d'appeler.*
he neg ceases of-call
'He doesn't stop calling'.

Schapansky (2002) argues that in French the possibility of negative sentences with only *ne* can be captured by the distinction between contrary and contradictory negation. In sentences with just *ne*, the meaning is contrary whereas with *ne pas* the negation is contradictory. Schapansky defines the distinction between contrary and contradictory as follows:

> Contradictory negation is a relation between two propositions: p and ¬p (not p) such that the truth of one implies the falsity of the other. If p is true then ¬p is false. ... Contradictory negation is quantifying. ... Contrary negation is a relation between two propositions such that both p and ¬p can be false at the same time, but they cannot be both true. ... Contrary negation is not quantifying (Schapansky, 2002: 796).

This distinction between quantifying and non-quantifying meanings captures the concept that when French moved from stage 1 to stage 2 of Jespersen's cycle (see above) then a Q value or Quantifier value was added to negation (Muller, 1995) with *ne* being [+neg, -Q] and *pas* being [+neg, +Q] (Schapansky, 2002: 794). Schapansky illustrates this with the following examples (Schapansky, 2002: 796):

(2.107) *Je ne peux pas chanter.*
I neg can not sing
'I am not able to sing'

(2.108) *Je ne peux chanter.*
I neg can sing
'I am not able to sing'

In the first example (with *pas*), the person is not able to sing, i.e. has no singing voice. The *pas* has wide scope over the sentence and it contradicts the statement 'I am able to sing'. The second example, however, does not imply the person has no singing voice but that they are not able to sing at that point perhaps for some external reason. As there is no element with a Q value, the *ne* has narrow scope over the sentence. Under this analysis, *ne* is inherently negative (Schapansky, 2002: 803). In English this distinction between contradictory and contrary negation is not overtly marked (although the addition of *quite* can give the contrary reading). In English *not* would be [+NEG, +Q].

English speaking learners of French would have to establish that in standard French negation requires both *ne* and *pas* and that the distinguishing feature

between these two elements is the Q feature not NEG. They would have to establish that *pas* carried the +Q feature required to express contradictory negation.

This section and the previous one on adverbs both show that certain assumptions about the syntactic analysis of adverbs and negation per se must be made before the distribution of negation and adverbs can be used as evidence of verb movement. In the next section I will examine how the use of subject and object clitic pronouns can also provide evidence for whether a learner is projecting IP and whether the verb has raised out of VP and into TP.

2.5 Clitic pronouns

The verb raising analysis summarized in this chapter has crucially relied on two types of sentence - one containing adverbs and the other containing negation. This difference between the two languages has another important fall out which will be empirically tested in the study of English learners of French outlined in subsequent chapters. The distribution of subject and object pronouns can also provide evidence for verb raising. In French pronominal forms show a different distribution to English as shown in the examples 2.109-2.118.[35]

- Subjects

(2.109) *Je mange une pomme.*
I eat an apple.
'I'm eating an apple'.

(2.110) *Moi, je mange une pomme.*
me I eat an apple
'(As for me,) I am eating an apple.'

(2.111) *Jean, il mange une pomme.*
Jean he eats an apple
'John is eating an apple'

(2.112) I am eating an apple.

(2.113) *Me, I am eating an apple.

[35]This is by no means an exhaustive list of the differences between English and French pronominal usage but merely suggestive of some basic differences.

(2.114) *John he is eating an apple

- Objects

(2.115) *Je la mange.*
I it eat.
'I am eating it'

(2.116) **Je mange la*
I eat it

(2.117) I eat it.

(2.118) *I it eat.

As these examples show, in French the subject pronoun can appear (be doubled with) a noun *Jean* or strong pronoun *moi* but in English it cannot. The object pronoun appears between the subject and finite verb in French but after in English. Kayne (1975) argues that this distribution suggests that the pronouns in French are qualitatively different to the pronouns in English. He claims that in French some pronouns are actually clitics which form a syntactic unit with the verb rather than pronouns which do not form a unit with the verb. Kayne (1975: 84) identifies four main tests for determining if a pronoun a clitic. Subject clitic examples are from Kayne (1975: 84-5) and the object clitic examples are from Rowlett (2007: 131).[36]

- Nothing can intervene between a clitic and verb except other clitics.

(2.119) **Il, paraît-il, est fou.*
he appears-it is crazy
'He, it appears, is crazy'.

(2.120) He, it appears, is crazy.

(2.121) *Jean, paraît-il, est fou.*
Jean appears-it is crazy
'Jean, it appears, is crazy.'

[36]The assumption here is that English does not have clitics. It is true that it does not have subject and object pronominal clitics but it may have verbal clitics. Radford (2004) argues that reduced forms of *have, is, will, not*, i.e. *'ve, 's, 'll* and *n't*, are phonological clitics. Zwicky and Pullum (1983) argues that unlike the other forms just mentioned *n't* is not a phonological clitic but an inflectional affix. Schwartz (1999) argues that the presence of these clitics may facilitate the acquisition of verbal clitics by English learners of French. See footnote 38 for a definition of phonological clitics.

- Clitics cannot be modified.

(2.122) **Ils tous partiront bientôt.*
they all will-leave soon
'They all will leave soon.'

(2.123) *Eux tous partiront bientôt.*
them all will-leave soon
'All of them will leave soon.'

(2.124) All the boys/all of them will leave soon.

- Clitics cannot be conjoined.

(2.125) **Jean et il partiront bientôt.*
Jean and he will-leave soon
'John and he will leave soon.'

(2.126) **Il et elle partiront bientôt.*
he and she will leave soon
'He and she will leave soon.'

(2.127) *Jean et lui partiront bientôt.*
John and him will-leave soon.
'John and him will leave soon.'

(2.128) **Je le et la vois .*
I it and it see.
'I see this and this'.

- Clitics may not be contrastively stressed.

(2.129) **IL partira le premier.*
He will-leave the first
'HE will leave first'

(2.130) *LUI partira le premier.*
Him will-leave the first
'HE will leave first.'

(2.131) He will leave first.

(2.132) *Il LE voit. He it sees

'He sees IT.'

Rowlett (2007), following work by Rizzi (1989) and Sportiche (1996), argues that there is a difference between subject and object clitics in French. The former can be omitted in coordinating sentences whereas the latter cannot as shown in the examples below (Rowlett, 2007: 145).

(2.133) *Le journal, je l'achète et le lis tous les jours.*
the newspaper I it buy and it read all the days
'I buy and read the newspaper every day.'

(2.134) **Le journal, je l'achète et lis tous les jours.*
the newspaper I it buy and read all the days

(2.135) *Je me réveille et je me lève de bonne heure.*
I myself wake and I myself get-up of good time
'I wake up and I get up early.'

(2.136) *Je me réveille et me lève de bonne heure.*
I myself wake and myself get-up of good time

Rizzi (1989) suggested that *ne* forms a break between the subject clitics and the other clitics (reflexives, e.g. *me, te, se*, object clitics, e.g. *le, la, lui, leur* and other forms *y, en.* Sportiche (1996) suggests this would support the idea that subject clitics may be qualitatively different from object clitics, that is "...subject clitics do not have to be syntactic clitics at all ... and they look like phonological clitics" (Sportiche, 1996: 217).[37] Lefebvre (1998: 148-9) suggests five diagnostic differences between syntactic and phonological clitics. These are:

i syntactic clitics are phonologically distinct from strong pronouns (e.g. *je* versus *moi*;

ii syntactic clitics have a different distribution from nouns (e.g. object clitic precedes verb, noun object follows it);

iii syntactic clitics can undergo clitic climbing (was possible in French until 17th century);

[37]Syntactic clitics are lexical entries and distinct from pronouns whereas phonological clitics are reduced forms of the strong pronoun and are not separate lexical entries (Lefebvre, 1998: 148).

iv syntactic clitics are syntactically conditioned whereas phonological clitics are phonologically conditioned;

v phonological clitics may appear in nominal structures and PPs (in French only strong pronouns can, e.g. *pour moi* versus **pour je.*

These tests lead Lefebvre to argue that French has syntactic clitics (Lefebvre, 1998: 150). Another related argument is that subject clitics in spoken French are verbal agreement markers, i.e. spoken French is actually a pro-drop language and that the subject clitics are the morphological markers of agreement but they appear pre-verbally rather than post-verbally as in languages like Spanish (see for example Auger, 1994, Miller and Monachesi, 2003). De Cat (2005) identifies four consequences of this morphological approach in French as shown below (De Cat, 2005: 1196)

i Subject-verb agreement can be marked twice morphologically.

ii Subject clitics should not be available for syntactic operations independently of their host.

iii Preverbal clitics appearing between the subject clitic and the verb also have to be analyzed as affixes. These elements include *en, y*, object clitics and the negation particle *ne.*

iv subject doubling is predicted (i.e. the co-occurence of an XP in [spec TP] and of an adjacent subject clitic).

She argues against each of these four predictions using evidence from the York corpus and the Cat corpus of spoken adult and child French from Canada, Belgium and France. Firstly, she argues that if subject clitics are agreement markers then in certain cases, e.g. 2nd person plural in the present tense, subjunctive, future or imperfect, would be marked twice for person and number - once with the clitic/agreement marker and once with the morpheme on the end of the verb, for example *vous pleuriez* (you cried, 2nd person plural imperfect). In this case then we would expect either the clitic *vous* or the morphological

suffix *-iez* to be able to be dropped. Neither is possible. Secondly, De Cat argues that subject clitics in French can undergo syntactic movement as shown by subject verb inversion in yes/no questions. Thirdly, she argues that following Zwicky and Pullum (1983), if subject clitics are agreement morphemes or affixes then all the object clitics, reflexive pronouns and elements such as *ne, y* and *en* must also be affixes. De Cat argues against this by showing that *ne* has a "distribution that is structurally determined", e.g. its role in marking scope of negative sentences (De Cat, 2005: 1202). She also argues that object clitics cannot be affixes as they cannot be attached pre-syntactically (i.e. in the lexicon) as they can appear "either on the infinitival verb of which it is an argument, on a higher infinitival or on the finite verb" as shown in the examples below (De Cat, 2005: 1203).

(2.137) *Il va les lire.*
he will them read
'He will read them'

(2.138) *Il va les faire lire.*
he will them have read
'He will have read them'

(2.139) *Il les a fait lire.*
he them has had read
'He's had them read'

Based on these arguments, I conclude that French has clitics and not weak pronouns and that in French both subject and object clitics are syntactic not phonological clitics. The task then for the English speaking L2 learner of French is to establish that French has clitics and not pronouns as in English. However, so far we have not established how the presence of clitics can be taken as evidence of verb raising. Two different schools of thought have dominated the analysis of where clitics appear in the underlying structure of French until a proposal by Sportiche (1996) suggested a method of reconciling them. The first school, represented by Borer (1983) among others, argued that clitics are "base-generated in their surface position" (Sportiche, 1996: 213) and the second

school, argued for, for example, by Kayne (1975) that clitic is "moved from the underlying XP* position" (ibid). These two approaches, base-generation versus movement, are reconciled under a proposal by Sportiche (1996) who argued that clitics head their own maximal projections (possibly CliticP) and clitics may undergo movement (Sportiche, 1996: 215). These maximal projections are IP internal, i.e. they project above VP and below TP. Therefore when the verb raises from VP to TP it will pass the CliticP and the clitic will attach to it and raise to the higher position with the verb (see tree given in figure 2.13 below).

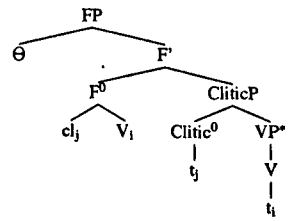


Figure 2.13: Clitic Projection Rowlett (2007: 135)

Under this analysis, the presence of clitics (subject or object) can be taken as evidence that there is an IP projection and that the verb has raised from VP to TP in order for the clitic to adjoin or cliticize to the verb as also shown by the fact that clitics can only appear with a finite verb (see below).

(2.140) *Je regarde la télé.*
i watch-FIN the TV
'I watch TV'

(2.141) **je regarder la téé.*
i watch-INF the TV

Grüter (2006c) adapts Sportiche's 1996 account in light of the developments within Minimalism. She argues that features on the head of CliticP are checked via Agree. These features include [+specific], i.e. that the clitic refers to something already specified in the discourse, and interpretable features such as Number, Gender and possible Person. Clitics will also have an uninterpretable Case feature. Following Harley and Ritter (2002), Grüter argues that for object clitics, masculine singular (*le*) is the under-specified form and she suggests, following Noyer (1997) that Gender is "more deeply embedded in the feature structure

than Number" (Grüter, 2006c: 57-8). The implication for L2 learners of French of this analysis of object clitics is clear - the masculine singular *le* would be the default, under-specified form which may appear in non-masculine or non-singular contexts. As learners specify the features, number would appear and gender would remain most problematic.

This discussion of subject and object clitics clearly shows that the task for the English learner of French is twofold. Firstly the learner must establish that in French pronominal forms are clitics rather than weak pronouns. Secondly, they must establish that they cliticize to the verb when the verb raises.

In conclusion we have seen that the differences in surface word order between French and English can be accounted for under different verbal positions, i.e. that in French the verb raises whereas in English lexical verbs do not. The assumptions that this proposal is based upon rest on fixed positions for adverbs and negation. As has been shown both of these assumptions have been disputed, particularly in the case of adverb placement. However, even under those accounts which dispute universally fixed adverb and negation placement, verb movement still occurs. It is therefore possible to see if English learners of French can acquire verb movement by examining their use of negation and (certain) adverbs. To complement this, it is also possible to examine the use of subject and object clitics as these are associated with IP and are not claimed to be present in English. At each point of the discussion I have highlighted the task for the English speaking L2 learner of French of differing syntactic analyses. However, the role of the first language (L1), in this case English, in the acquisition of a L2, in this case French, has been subject to much debate among language acquisition researchers. In the next chapter, I will outline some of the most prominent theories of L2 acquisition and how they pertain to the L2 acquisition of verb movement before turning to the specific empirical study designed to test between these different theories of acquisition.

Chapter 3

Theories of L2 acquisition

Universal Grammar, as outlined in the previous chapter, constrains native language by limiting the hypothesis space of the L1 learner. Since the early 1980s researchers working in second language acquisition have been interested in examining if UG still constrains the acquisition of a second language (L2) (Krashen, 1981). Particularly of interest is whether properties of UG that are not present in the L1 can be acquired in the L2 (for example, can English learners of French acquire verb raising), whether UG-access is subject to a critical period (Krashen, 1973, Lenneberg, 1967) or whether L2 acquisition is fundamentally different from L1 acquisition (Bley-Vroman, 1990). For those researchers who argue that UG is still involved, the extent of its involvement, the nature this involvement takes and the role of the first language is still a matter of some debate.

In this chapter I will first briefly consider two competing UG-driven views of first language acquisition as these inform the theories of second language acquisition. I will then review three theories of the Initial State which each argue for a different role for the L1 and consider their implications for English learners of French. I will proceed to outline different theories which attempt to account for the apparent optionality in L2 acquisition in the post-Initial State and again consider their implications for English learners of French on the basis of the syntactic structures outlined in the previous chapter.

3.1 L1

As the adult second language learner comes to the acquisition process with a first language in place, it could be argued that perhaps how the now adult L2 learner acquired his/her first language as a child may not be relevant as that process has 'finished'. However, the arguments surrounding L2 development have certain obvious parallels with the discussion of L1 acquisition. If UG is still available to the L2 acquirer, then perhaps he/she will go through the same route of acquisition as in L1. This empirical question has informed the L2 debate as will be discussed in the later section on L2. Within the L1 literature there have been two predominant schools of thought regarding how a child acquires functional categories (CP, IP, DP). These two approaches have been called the 'strong continuity' and the 'weak continuity' hypotheses.

3.1.1 Strong continuity hypothesis

Hyams (1996) argues for the 'strong continuity hypothesis', which claims that children acquiring their L1 have all the functional categories (DP, IP, CP) intact from the beginning but that these "heads may be under-specified" and that "the difference between the early grammar and the adult grammar with respect to the option for having under-specified functional heads is a result of differences between the pragmatic system of children and that of adults" (Hyams, 1996: 93). Under-specification, for Hyams, is understood to mean the absence of tense or agreement features. Hyams argues that this then accounts for the lack of overt subjects in early child L1 English and the optional infinitive stage (Wexler, 1994). Further evidence for the under-specification of IP comes from the lack of null subjects with finite verb forms. If the verb form is finite then it must have checked its features in a functional category (IP) assigning case to a subject and therefore under this analysis you would not expect to find null subjects as they can only appear when the functional category assigning case (IP) is not specified. In order to examine this, Hyams looked at the use

of the verb 'be' by three children from the CHILDES database (MacWhinney, 2000). She finds that the use of null pronouns with 'be' is restricted to the third person singular form *'is'* and that these null pronouns are produced "far less frequently than with lexical verbs" (Hyams, 1996: 100). As modals are also only associated with a fully specified IP, Hyams predicts that they should not co-occur with null subjects. This is indeed what she finds when she considers the results of 21 children studied by Valian (1991). In this study over 94% of sentences containing modals also contained an overt subject. The problem for this account arises when past tenses are considered. In English regular past tenses are formed with the morpheme *'ed'*. Hyams finds that the predicted non-occurance of null subjects with past tensed verbs does not happen. In fact the proportion of null subjects with a past tense verb "is close to the overall proportion of null subjects" (Hyams, 1996: 101). Based on work by Sano and Hyams (1994), Hyams (1996) argues that these verbs with *'ed'* endings are not actually finite past tense forms but rather are participial forms. Therefore they are part of a low Aspect phrase and can only check null case, in the same way as a gerund or infinitive. This leads Hyams (1996) to claim "...finite morphology is ambiguously aspectual in the early stage, and when it is aspectual it provides a licit context for PRO and when it marks tense, it does not. Thus ...we maintain that the early grammar expresses tense as well as aspect" (Hyams, 1996: 103). Hyams argues that it is the very presence of IP which makes this account of null subjects plausible as it does not require any additional categories or structures to those available in adult English. She argues that if IP were not present (as in the weak continuity approach outlined below or the Truncation hypothesis (Rizzi, 1994)) then

> we are forced to assume a new kind of empty category with distinct properties from those that exist in similar structures in adult language ... since neither *pro* nor PRO is licensed as subject of a small clause or truncated tree. (Hyams, 1996: 104)

Hyams (1996) defines under-specification as I not being part of an I-chain, that is that the temporal index, which would normally give I its present tense reading, is absent (Hyams, 1996: 106). Hyams argues that in a similar way to nominal co-reference, this indexation of I with a temporal operator can be described as temporal co-reference. For adults this means that root infinitives, which would be indistinguishable from present tense, would be ruled out but are possible in non-present tense contexts. See the examples below (Hyams, 1996: 109, ex.24a-b).

(3.1) John dance. Never in a million years!

(3.2) My brother marry Mary. Over my dead body!

This would mean that the principle ruling out temporal co-reference in adult grammars is a semantic/pragmatic one. Hyams argues that as children have been shown to have problems with co-reference in the nominal domain (so called condition B violations, see for example Chien and Wexler (1990)) and that this has independently been hypothesized to lie in the semantics/pragmatics area, then she suggests that the temporal co-reference allowing root infinitives is also because children have not yet developed the relevant semantics/pragmatics but that the syntactic tree is complete from the outset.

3.1.2 Weak continuity or structure building hypothesis

The 'weak continuity' or 'structure building' hypothesis argues the opposite, that the tree is not fully instantiated from the outset but that the child initially posits a reduced tree, perhaps only consisting of a VP, and gradually builds that tree by "acquiring a new type of item [which] will lead to the formation of a new type of projection" (Radford, 1995: 1). Using evidence from the acquisition of L1 English, Radford (1995), in accordance with Hyams (1996) outlined above, claims that when children start producing clauses, they are characterized by non-finite utterances. However, Radford (1995) argues sentences like those given below have the structure of a simple VP with no functional structure

present. This is the opposite of what Hyams (1996) and the 'strong continuity hypothesis' claim to be the underlying representation of these early non-finite clauses. Examples and tree are taken from Radford (1995: 2:).

(3.3) Mommy doing dinner (Daniel 1;10)

(3.4) Wayne taken bubble (Daniel 1;9)

(3.5) Machine make noise (Kathryn 1;9 from Bloom (1970)

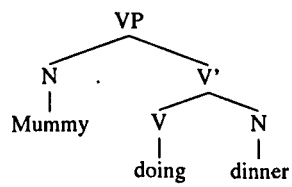


Figure 3.1: Weak continuity tree, Radford (1995: 2)

Radford (1995) supports this claim that IP and CP are not projected by highlighting the absence of infinitival *to*, negation with do-support, complementizers and inversion with yes/no questions as shown in the following examples (taken from Radford (1995: 2-3)).

- omission of infinitival *to*

  (3.6) want [have money] (Daniel 1;7)

  (3.7) want [open door] (Daniel 1;8)

- omission of auxiliaries (do-support) with negation

  (3.8) no lamb have it (Daniel 2;0,3)

  (3.9) no dog stay in the room (Daniel 2;1,2)

- omission of complementizers

  (3.10) want [baby talking] (Hayley 1;8)

  (3.11) want [lady open it] (Daniel 1;10)

- omission of inversion in yes/no questions

(3.12) chair go? car go? Jane go home? (Claire 2;0-2;1 from Hill (1983)

Radford (1996) argues against the suggestion by the strong continuity hypothesis (Hyams, 1996) that the use of null subjects in child L1 English are due to the use of PRO. Using data from Adam (aged 2;2) he argues that children do use null subjects with finite auxiliaries and therefore the null subject cannot be PRO, as argued by Hyams (1996) as PRO is only licensed with non-finite subjects. Examples of finite auxiliaries with null subjects are given below (Radford, 1996: 49; ex 13).

(3.13) don't know

(3.14) don't paint that (= I didn't paint that)

(3.15) don't work

(3.16) don't wanna draw on this one

(3.17) can't knock them down

(3.18) can't get it out

(3.19) can't stroke me now

The distribution of these null subjects are 41% with finite auxiliaries, 6% past tense verbs, 18% perfective participle, 11% gerund forms and 24% stem forms (ambiguous between finite and non-finite). Radford argues that the null subjects found in both finite and non-finite utterances in child L1 English are the same as those found in adult 'diary drop'[1] and therefore can be analyzed as a 'discourse-identified null constant' (Radford, 1996: 48). This would then counter the claim made by Hyams (1996) and quoted previously that a structure building approach would require children to posit a new type of null constant not attested in adult grammar (Hyams, 1996: 104). In terms of a lack of nominative case assignment with finite verbs (see examples below from Radford, 1995: 4,

[1]In adult L1 English the subject can be omitted in certain registers, most commonly in a diary. For example "Don't know what I can do. Can't tell my parents I've failed my exams." (Radford, 1996: 48, ex 11). See Haegeman (1990, 1994) for further discussion.

ex.9), Radford argues that as the subject of the utterance would be in Spec VP not Spec IP it could not be assigned nominative case but rather would receive default (or objective) case.

(3.20) Me got bean (Stefan 1;5)

(3.21) Me want it (Bethan 1;8)

(3.22) Her gone in there (Angharad 1;10)

Radford (1996) argues that this again is also attested in adult grammar with sentence fragments such as "Who did it? - Me" (Radford, 1996: 54).

The structure building approach has been criticized for both its descriptive and explanatory adequancy. Descriptively the criticism is that this account does not generalize to languages other than English as French children, for example, quickly distinguish between finite and non-finite verbs in terms of both verbal morphology and raising over negation (Pierce, 1992). Radford (1996) warns that the initial stages or 'VP-stage' is a grammatical stage and not a chronological age and that children will vary in terms both of the age at which they produce these sentences and the length of time before they move to the next stage (Radford, 1996: 62-3). There are two goals of explanatory adequacy that the structure building account must address. Firstly, why are these early utterances lexical VPs and secondly, how does the child develop functional structure, e.g. IP. In relation to the first question, Radford (1996: 65-66) suggests three possibilities: a 'lexical learning account', which argues that children "only project those lexical items which they have acquired at any given stage of development and that they acquire contentives before functors" (Radford, 1996: 65), a teleological account, which argues that as "all clauses share a common VP core, and that IP and CP are extended projections of VP, then it follows that children cannot in principle develop IP or CP projections until they have developed VP"(Radford, 1996: 66), and a maturational account, which suggests a link between brain maturation (e.g. development in Broca's area) with the development of functional projections and so only lexical projections are available at

the earliest stages. With several plausible explanations of why only lexical categories may be present in the initial stages of L1 acquisition, the question remains as to how a child moves from projecting lexical categories only to developing functional projections. Radford (1990) suggested that as the child matures then all functional projections (DP, IP, CP) emerge at the same time, however, Radford (1996) suggests that children build the syntactic tree one layer at a time. Therefore evidence for IP will exist before evidence of CP. As this present study will focus only on IP, the pertinent question is what triggers development from VP to IP. Radford (1996: 67) acknowledges that the data seem to be be mixed with Pierce (1989) arguing that 'be' is the first IP element to be used whereas Vainikka (1994) argues that in her data the first IP elements are past tense marking (use of 'ed') and some modals. However, at this point, the projection of IP appears to be optional and children can either project V, VP or IP (see Rizzi (1994) for a fuller discussion of the Truncation Hypothesis).

These two theories on how children acquire a first language have informed the discussion of second language acquisition, particularly in terms of what is the Initial State and following from that how do L2ers develop over time. Do second language learners go through a similar pattern as first language learners and how can this best be explained syntactically? In other words, do L2ers follow a similar pattern to 'structure building' and initially project only lexical categories or are all the functional projections available from the outset or do neither of these options sufficiently characterize L2 acquisition? In the next section, three competing theories of the Initial State will be reviewed as well as studies supporting or criticizing them.

3.2 Theories of Initial State

The nature of the initial state for adult second language (L2) learners has generated much debate since the early 1990s. This is due to certain differences between child first language (L1) acquisition and adult L2 learners. Adult learners

already have a first language and they have a fully developed cognitive system (Ayoun, 2003: 150). Researchers also argue adult L2 learning is characterized by a failure to attain target native-like performance unlike child L1 and child L2 learners (Birdsong and Molis, 2001, Bley-Vroman, 1990).

The nature of the Initial State leads to far-reaching consequences about what L2 learners (L2ers) can achieve in terms of their final or end-state grammar and the intermediate stages they go through. In this section I will review three theories on the Initial State of L2 acquisition: Full Transfer Full Access (Schwartz and Sprouse, 1994, 1996), Minimal Trees/ Organic Grammar (Vainikka and Young-Scholten, 1994, 1996, 2005) and Modulated Structure Building (Hawkins, 2001b).[2] [3] After each theory is reviewed, I will examine some criticisms of that theory as well as studies (if available) which, the authors argue, provide evidence for that particular theory.

3.2.1 Full Transfer/Full Access

Schwartz and Sprouse (1994, 1996) have proposed the Full Transfer/Full Access model (henceforth FT/FA), which argues that the initial state of second language acquisition is the end state of L1 acquisition. In other words second language learners start with their knowledge of their first language. This represents the "full transfer" part of their hypothesis. FT/FA suggests that when the L2 learner receives input in the second language this then forces the learner to restructure his/her internal grammar. Restructuring is possible as the learner has full access to Universal Grammar (UG). Schwartz & Sprouse (S&S) contend that this restructuring process does not happen immediately but will take varying amounts of time. They argue:

[2]Bhatt and Hancin-Bhatt (2002) have suggested an alternative theory of the Initial State, called 'Structural Minimality'. This theory proposes that the functional categories related to IP but not CP transfer from the L1 to the L2 initial state. As this study focusses on the acquisition of IP, it is not distinct from FT/FA (Schwartz and Sprouse, 1996). Therefore, it will not be reviewed and tested as part of this study. However, please see Dekydtspotter et al. (2005) for a discussion of this paper and a re-analysis which argues that CP does in fact transfer.

[3]The three theories here also make predictions about the course of development as will be discussed in each review.

> The course that L2 development takes is determined in part by the initial state, in part by input, in part by the apparatus of UG and in part by learnability considerations. (Schwartz and Sprouse, 1996: 41)

S&S argue that there are two central claims which relate to their approach. One is that, following Corder (1967) and Bley-Vroman (1983) "interlanguage must be analyzed on its own terms" (Schwartz and Sprouse, 1996: 42).

> The fact that a particular phenomenon of Interlanguage superficially appears to match a target-language phenomenon does not entail that one and the same analysis underlies the two" (Schwartz and Sprouse, 1996: 42).

The second claim relates to learnability as the L2 learner may not arrive at the target end-state grammar. They argue that fossilization may be due to a lack of positive input for some more "obscure" aspects of the target language. S&S argue that while the initial states of L1 and L2 acquisition differ and the end states of L1 and L2 acquisition often differ, the cognitive "processes underlying development (as realized by the restructured Interlanguages) are precisely those mechanisms that constrain L1 acquisition" (Schwartz and Sprouse, 1996: 42).

S&S present data from a case study of a L1 Turkish speaker learning German (Cedvet) as a second language. This data is part of the ESF project (Klein and Perdue, 1992) . Since Turkish and German are both SOV languages in embedded clauses but German is V2 in matrix clauses (den Besten, 1983, Koster, 1975), S&S focus on the position of the verb. S&S identify four stages in Cevdet's use of finite verbs (Schwartz and Sprouse, 1996: 41, ex. 1-3).

- Stage 1: (X)SVO

(3.23) *jetzt er hat Gesicht [das is falsches Wagen]*
now he has face that is wrong car
'now he makes a face (that) that is the wrong car'

- Stage 2: (X)SVO; $XVS_{[+pron]}$

(3.24) *in der Türkei der Lehrer kann den Schüler schlagen*
in the Turkey the teacher can the pupils hit
'in Turkey the teacher can hit the pupils'

(3.25) *dann trinken wir bis neun Uhr*
then drink we until nine o'clock
'then we will drink until nine o'clock'

- Stage 3: (X)SVO; XVS$_{[\pm pron]}$

(3.26) *später der Charlie wollte zum Gefängnishaus*
later the Charlie wanted to-the prison
'later Charlie wanted to go to the prison'

(3.27) *das hat eine andere Frau gesehen*
that has an other woman seen
'another woman saw that'

- Stage 4

> Declarative main clauses with two or more nonverbal constituents (Schwartz and Sprouse, 1996: 43).

However, S&S note that Cedvet uses finite verb fronting even in Stage 1, i.e. finite verbs are not in verb final position but rather preceded by the subject. This leads them to posit a Stage 0, which they suggest Cedvet has already passed through. This stage is characterized by verb final clauses (Schwartz and Sprouse, 1996: 44). They argue:

> every single German utterance consisting of a main clause made up of more than just the subject and a single finite verb will be incompatible with the grammatical system transferred from Turkish. As soon as Cevdet develops enough vocabulary recognition to understand the meaning of short sentences, the inability of his system to assign a representation to such sentences will necessarily lead to (UG-constrained) restructuring of that system. (Schwartz and Sprouse, 1996: 44-5)

In adult German the VP and IP are both head final and CP is head initial. This yields the SOV order for embedded clauses as the finite verb would remain in I but V2 in declarative main clauses as the finite verb will move to the head initial C position (see Eubank, 1996: 81 for further detail). S&S argue that as the finite verb is in an SVO position, the finite verb must therefore be in C. S&S argue that the reason why the subject precedes the finite verb is a result of transfer from the L1 Turkish. In Turkish the subject gets nominative case through a spec-head relationship. If the finite verb is in C then the subject must have moved to Spec-CP (Schwartz and Sprouse, 1996: 46). However, as can be clearly seen in stage 1, Cevdet has an element before the subject (XSVO). Under FT/FA this is analyzed as optional adjunction to CP (see figure 3.2). S&S suggest that this may also be transfer from L1 Turkish, which allows scrambling or following Hoekstra and Jordens (1994), a "standard mechanism for creating structure in the process of acquiring language" (Schwartz and Sprouse, 1996: 47).

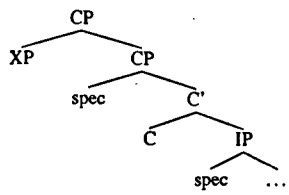


Figure 3.2: FT/FA Cevdet Stage 1 (Schwartz and Sprouse, 1996: 46, ex. 7)

At Stage 2, Cevdet appears to distinguish between pronominal and non-pronominal subjects. 32% of all pronominal subjects appear in the order $XV_{[+F]}S_{[+pron]}$ whereas none do in stage 1 and only 1/120 non-pronominal subjects appear in this order. In German, the order $XV_{[+F]}S$ is permitted and does not distinguish between pronominal and non-pronominal subjects. Following work by Rizzi and Roberts (1989) on the ungrammaticality of subject-verb inversion in questions with non-pronominal subjects in French,[4] S&S argue that Cevdet is using a

[4]In French only clitic subjects can undergo subject-verb 'inversion' or the raising of the finite verb past the subject. With DP subjects this is not possible as can be seen in the following examples (Schwartz and Sprouse, 1996: 47)

i Qui a -t- elle vu?

system of 'incorportation'[5] as in French, rather than German V2. At stage 3 non-pronominal subjects are also appearing in $XV_{[+F]}S$ in 8/61 utterances. This cannot be accounted for under the stage 2 analysis of incorporation and therefore they argue that an alternative analysis is needed. S&S suggest the 'government option' according to which as CP governs IP then the subject can remain in Spec IP (governed by CP) and get nominative case (Schwartz and Sprouse, 1996: 48-9). S&S note that at this stage, Cevdet is still using adjunction to CP. They hypothesis that this structure may fossilize as while German is strictly V2, nothing in the input will tell him that V3 is ungrammatical[6] (Schwartz and Sprouse, 1996: 49).

Schwartz & Sprouse support their argument by re-examining the data presented in support of alternate theories, such as Minimal Trees (now Organic Grammar). In a later section, Minimal Trees/ Organic Grammar will be reviewed and Schwartz & Sprouse's criticisms will be discussed at that point. However, S&S argue that FT/FA not only is based on empirical evidence but is also conceptually very appealing. They argue that cognitively it is more plausible that the whole of the L1 system (apart from the "phonetic matrices of the L1 lexicon" (Schwartz and Sprouse, 1996: 66)) transfers to the L2 rather than "extracting a proper subpart from the L1 grammar and using that proper subsystem as the basis for a new cognitive state" (ibid.). They discount the argument from language disorders as in L2 acquisition the brain is not damaged. They also argue that as L2 developmental stages differ for learners with different

who has she seen

ii *Qui(obj) a Marie vu?
who has Marie seen

iii A -t- elle vu Jean?
has she seen Jean

iv *A Marie vu Jean?
has Marie seen Jean

[5]Incorporation has been argued to account for the distribution between pronominal and non-pronominal subjects and subject verb inversion. Nominative case is assigned in French by Spec-Head agreement. However, "pronominal subjects, following Baker (1988), can satisfy the case filter by incorporating into a finite verb which has moved to C" (Schwartz and Sprouse, 1996: 47).

[6]This assumes that explicit or negative evidence is either not available or if it is that it would not help to re-structure his internal grammar. See Schwartz (1993) for further discussion.

L1s (e.g. English learners of French go through different stages to, for example, Japanese learners of French) that these differences must be present in from the outset, i.e. the Initial State. Vainikka and Young-Scholten (1996) dispute that the stages are different for different L1s but this will be reviewed under the Organic Grammar/Minimal Trees section. Schwartz & Sprouse conclude

> In conclusion, the reason 'everything transfers' in L2 acquisition is because 'everything' - including all the semantically based functional elements necessary for coherent interpretations together with all the syntactically based functional elements required by the computational system - is necessary for there to be a natural-language grammar in the first place. (Schwartz and Sprouse, 1996: 68-9)

The Full Transfer/Full Access hypothesis by Schwartz and Sprouse (1994, 1996) has been subject to several criticisms, principally by the authors of alternate hypotheses, e.g. Eubank (1996), Vainikka and Young-Scholten (1996). In the following section, I will review some of the support for FT/FA before briefly outlining these criticisms.

3.2.1.1 Support for FT/FA

Several recent studies have supported the FT/FA hypothesis. Many studies, particularly those looking at production data, use participants who are post-Initial State to make hypotheses about the Initial State. For example, if L1 transfer is evident in their later productions then it is suggested that it would have been there in the earlier productions/competence. In this section, I will review a recent study that uses data from post-Initial State learners to inform on the Initial State as well as one using production data from beginning learners. I will then review some recent work on comprehension with L2 adults still in the Initial State.

Grüter et al. (2008) tested whether the L2 learner uses their entire L1 grammar as the initial state (Schwartz and Sprouse, 1996) or if L2ers can access UG

directly, without recourse to the L1 (Epstein et al., 1996). This latter theory has been termed the "Full Access without Transfer" (Grüter et al., 2008: 47, following White (2003)). If the L2 learner has direct access to UG without using the L1, then that learner would make the same hypotheses as the L1 child. If the L2 learner uses the entire L1 grammar, then the "initial value for any property of the L2 is predicted to be the (final) value of the learner's L1" (Grüter et al., 2008: 47). Grüter et al. argued that the acquisition of scope properties with disjunction differences between Japanese and English would provide evidence of UG access or L1 transfer. In English, disjunction is usually interpreted inclusively, i.e. in the sentence below (ex. 3.28), John speaks neither English nor German. However, in Japanese, the corresponding sentence can be true if John speaks either German or English but not both. If John speaks neither German nor English then a Japanese speaker would expect 'and' rather than 'or' (Grüter et al., 2008: 48, ex 1).

(3.28) John does not speak English or German.

As argued by the 'Semantic Subset Principle' (Crain et al., 1994) in order to acquire all the possible readings of the sentence above in Japanese, L1 children initially hypothesize the inclusive *'or'* English setting and then on the basis of positive evidence can acquire the other readings. Goro and Akiba (2004) found significant differences between L1 Japanese adults and children with the children rejecting non-inclusive 'or' readings. English L1 children are the same as English L1 adults and there is no developmental difference between them (Gualmini and Crain, 2005). Given this, Grüter et al. (2008) test if Japanese learners of English use their final L1 and interpret sentences with non-inclusive 'or', i.e. accept sentences where John speaks English or German (as predicted by FT/FA) or whether the learners use UG directly (without the L1) and accept only those scenarios in which John speaks neither English or German (as predicted by Full Transfer without Access). Grüter et al. tested 32 adult Japanese L2 learners of English, each with a minimum of 6 years instruction in English and 8 native

controls. The experiment was a truth value judgement task based on that used by Goro and Akiba (2004) and involved a scenario where 3 animals were rewarded for eating different things (a cake, a carrot and a pepper). Out of the 45 sentences, there were 10 experimental items as shown below (Grüter et al., 2008: 53, ex. 12).

(3.29) .[The animal] ate the cake, but he didn't eat the carrot or the pepper.

There were 2 conditions. The first that the animal had eaten one of the to vegetables and in condition 2, that the animal had not eaten any vegetables. In both conditions the animal had eaten the cake. This summarized below (Grüter et al., 2008: 53, ex. 13).

Condition	Judgement in English	Judgement in Japanese
1 (one veg eaten)	False	True
2 (no veg eaten)	True	False

Table 3.1: Summary of conditions Grüter et al. (2008: 53, ex.13)

The results showed that for the English native speaker control group, 7/8 subjects (87.5%) rejected sentences where one of the vegetables had been eaten. The results for the 32 Japanese L2 English subjects were the opposite with 82.5% of responses accepting sentences as true when one of the vegetables had been eaten. Analysis of the individual results showed that 5/32 speakers scored 8/10 or more in accepting only sentences where no vegetables had been eaten (i.e. the English judgement). As the other 27 learners accepted fewer than 4/10 of these sentences, Grüter et al. argue that they "show evidence of transfer from the L1" (Grüter et al., 2008: 54). This measure did not correlate with overall proficiency (ibid). Grüter et al. argue that even though these learners are no longer in the Initial State, the fact that there are clear L1 transfer effects in their later development argues for L1 transfer at all levels of development, including Initial State. They state:

> If at that point, or indeed any later point in development, the L2 grammar shows properties of the the L1 grammar that are incon-

sistent with the L2 grammar, this is taken as evidence for the Full Transfer hypothesis of the initial state. Thus the fact that the learners in the present study have had several years of exposure to English at the point of testing is not relevant. What is important is that even at this later point in development, we find strong evidence of L1 properties in their L2. This is directly compatible with the Full Transfer hypothesis. (Grüter et al., 2008: 54-5)

Another recent study by Bohnacker (2006) examined the role of transfer in L2, Bohnacker examines production data from L1 Swedish speakers learning German. Her six subjects are beginning learners (4 months instruction at first data collection) and she examines the role of transfer from the L1 but also examines if those students who have also learnt some English (n=3) are influenced by their L2 English in their L3 German. The other three students have are learning German as an L2. The structure she considers is verb placement in German. Swedish and German share the same features of verb raising in main clauses whereby the verb must raise to CP and be in "second position" (V2) or XVSO order as outlined in the review of Full Transfer/Full Access (Schwartz and Sprouse, 1994, 1996). English does not have verb raising and so sentences with XVSO are not grammatical but sentences with XSVO are. See examples below (German examples taken from Bohnacker (2006: 449) and Swedish example Bohnacker (2006: 453)):

- English examples

  (3.30) Often John watches TV. (XSVO)

  (3.31) *Often watches John TV. (*SVSO)

- German examples

  (3.32) *ich habe gerage das Licht ausgemacht (SVO)*
  i have just the light out-switched
  'I've just switched off the light'

  (3.33) * gerade ich habe das Licht ausgemacht (*XSVO)

(3.34) gerade habe ich das Licht ausgemacht. (XVSO)

- Swedish example

(3.35) *(och)* *så* *kommer* *han* *tillbaks* *igen* *med* *rostat* *bröd.*
(and) so comes he back again with toasted bread
(XVSO)

'(and) then he came back again with some toast'

However, Swedish is not as clear-cut as German and there is a (predominantly spoken) construction which allows for XSVO or XXVSO as shown in examples 3.36-3.37 below and which must include an unstressed 'så' (Bohnacker, 2006: 453):

(3.36) *så* *jag* *fick* *alltid* *rostat* *bröd* *i* *England.*
so i got always toasted bread in England
'So (therefore)' I always got toast in England.

(3.37) *så* *i* *England* *fick* *jag* *alltid* *rostat* *bröd.*
so in England got I always toasted bread
'So (therefore) in England I always got toasted bread.'

Bohnacker argues this 'så' is conclusive or consequential (as opposed to temporal) and that as analyses are not conclusive, it may be either a connective or an adverbial but it appears that it is adjunction to CP followed by a V2 clause (Bohnacker, 2006: 453). She also argues that *'sen' (then)* can appear in a similar position. She suggests, therefore, that Swedish learners of German may hypothesize that German also allows this type of construction with "connective adverbials" (e.g. *'so'* or *'then'*) and hence even without interference from L2 English, that the learners may exhibit some similar structures.

In addition to these construction, there is another way in which Swedish can allow two elements before the verb (V3). However, these are not XSVO orders but rather SXVO. In these cases, certain "focalizing adverbs' (e.g. *'bara' (only), 'liksom' (like), 'rensam' (even)*) can intervene between the subject and the finite verb. This is not possible in German.

The six learners tested in this study were enrolled on an *ab initio* German class with 3 hours of instruction per week. They were tested after 4 months and again after 9. Two of the learners only spoke Swedish in the first test so there is no German data for them at this point. The task was an oral monologue on the topic "What I do or would like to do in my spare time", which they recorded individually in a speech lab. Two of the four learners who were tested at this point also took part in recorded conversations between the learner and a native monolingual German speaker. All six learners were tested again after 9 months in the same way as at the first data collection.

Bohnacker found that SVX was the most common order for all learners (between 61%-84%) after both 4 months and 9 months of instruction. Verb initial sentences are extremely rare (less than 4% after 4 months and less than 1% after 9 months). V2 (i.e. XVS) is common at both points with between 14% and 31% after four months and between 15% and 37% after nine months. The difference in learners becomes apparent when V3 orders are considered. These are XSVO or XXVSO word orders. For those learners for whom German is an L2, there is only 1 instance (out of 128 utterances) of V3. For those learners who speak L2 English and German is their L3, instances of V3 range from 12% to 17% after four months and from 11% to 15% after nine months. For examples of V3, see below (Bohnacker, 2006: 465, ex.25, 28).

(3.38) *dann so haben ich gewart in Hamburg.*
then so have I been in Hamburg
'Then I've been to Hamburg'

(3.39) *freitagmorgen dann gehen wir Boulebahn, das ist in ein Haus.*
friday-morning then go we boules-court this is in a house
'On Friday mornings we go to the boules-court, which is indoors'.

Bohnacker argues that some instances (9%) of the V3 utterances, those of the form XXVS or SXV, may in fact be transfer from Swedish. However, the remaining 91% are of the XSV type and only appear in those learners who have

L2 English. For those sentences in which a subject is not in initial position, the learners who have no English, never use XSV whereas those learners who do have L2 English, the instances of XSV range from 38% to 48%.

Bohnacker concludes that this study provides "robust evidence for L1-syntax transfer of the V2 property from Swedish to German ... and evidence for a partial L2-syntax transfer from English to L3 interlanguage German" (Bohnacker, 2006: 478) and therefore can support the Full Transfer/ Full Access hypothesis of L1 transfer. She does not see that the influence of L2 English in any way contradicts this hypothesis but argues that perceived typological closeness (as perceived by the learner), L2 proficiency and "recency of L2 use" may all influence why the L2 transfers instead of or as well as the L1 in L3 acquisition (Bohnacker, 2006: 481).

One criticism of studies like Bohnacker (2006) is that as a certain amount of vocabulary and syntax etc. need to be in place in order to elicit production data, then the learners being tested may have already passed through the initial state. Grüter (2006a) and Grüter and Conradie (2006) have argued that due to the problems obtaining production data in the initial state, data from comprehension tests may in fact shed more light on this area. White (2003: 75) states:

> Indeed, to investigate the possibility that there might be a stage prior to the emergence of L2 speech in which fnctional categories are lacking, we need methodologies that do not rely on production data. Comprehension tasks where functional properties are manipulated are not easy to construct.

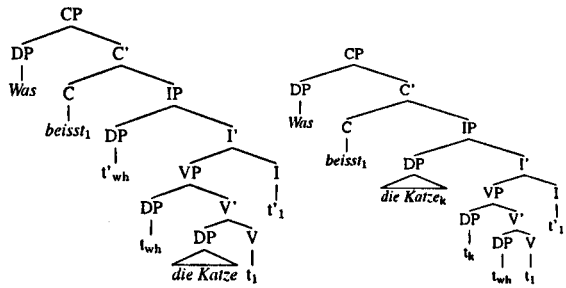
Grüter (2006a) tested predictions made by two popular accounts of the Initial State: Full Transfer/ Full Access (Schwartz and Sprouse, 1996) and Minimal Trees (Vainikka and Young-Scholten, 1996), which will be reviewed in the next section. The two theories make different predictions about the nature of L1 transfer at the initial stages. In Full Transfer/ Full Access everything transfers

from the L1 whereas in Minimal Trees only lexical categories transfer. In order to test empirically between these two positions, Grüter identified that these two theories would make different predictions about how English learners of L2 German would interpret ambiguous wh-questions, that is questions in which it is not clear if the wh-word refers to the subject or object. Examples 3.40 & 3.41, taken from Grüter (2006a: 288), show the differences between German and English in this respect.

(3.40) *Was beisst die Katze? (present tense)*
what bite-3SG the cat
'What is biting the cat?' (subject question)
'What is the cat biting?' (object question)

(3.41) *Was hat die Katze gebissen? (past tense)*
what have-3SG the cat bitten
'What has bitten the cat?' (subject question)
'What has the cat bitten?' (object question)

In German, case marking can distinguish between subject and object questions if the noun is masculine (*der* in the nominative for subject questions and *den* for object questions) but not if the noun is feminine (*die*) or neuter (*das*). The structural ambiguity between subject and object interpretations of the German questions above can be shown in the present tense tree below:



(a) Subject question (b) Object question

Figure 3.3: Underlying structure of subject and object wh-questions in present tense (Grüter, 2006a: 294, ex.6)

Grüter outlines the different predictions made by Full Transfer/ Full Access and Minimal Trees for English learners of German. She suggests that

Full Transfer/Full Access would predict that English learners of German would interpret present tense wh-questions as subject questions only but past tense wh-questions would be interpreted as object questions. Under Minimal Trees, she argues that present tense wh-questions would also be interpreted as subject questions. However, Grüter argues that past tense questions are difficult to analyze under Minimal Trees as both *was* and *die Katze* would be competing for the same Spec VP position. She suggests that *hat* would remain unanalysed due to its lack of saliency. This is shown in the tree below (figure 3.4. Therefore, Grüter argues that learners would "guess between the two interpretations available" (Grüter, 2006a: 300).

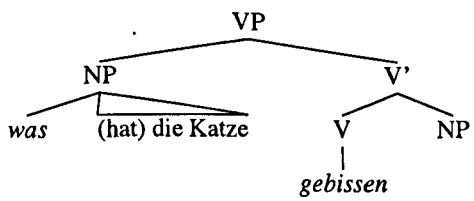


Figure 3.4: Attempt to accommodate German past tense wh-questions within Minimal Trees (Grüter, 2006a: 299, ex.17)

However, if learners adopt a linear order strategy to parse these questions, crucially, as opposed to Full Transfer/ Full Access, past tense questions would be interpreted as subject questions. The different prediction made by the two hypotheses are outlined in the table below:

	Present tense	Past tense
Minimal Trees	subject question	guessing (with a bias towards subject questions)
FT/FA	subject question	object question

Table 3.2: Summary of predictions: interpretation of questions in L2 German (Grüter, 2006a: 301, table 1)

To test between these two predictions, Grüter tested 17 beginning English speaking learners of German and 10 native speaker controls. The learners were instructed learners enrolled on a beginner German course at university (ages 18-30) with no prior exposure to German. They received three hours instruction

per week and were tested between week 8 and 10 of their course. In order to determine that the learners were still at the initial state, an elicited production task was administered in which learners had to tell a story based on a set of pictures. Between 4 and 16 verbal utterances were elicited from each learner. Using the criterion for determining the Initial State set out under Minimal Trees (see later section for a full discussion), all of the learners fell within the VP stage (i.e. the initial state). In the experimental task, learners were shown pictures of four animals following one another and were read a predetermined script. See example below:

> Die Schlange jagt die Schildkröte. Die Schlange ist hinter die Schildkröte. Der Schwein jagt die Schlange. Der Schwein ist hinter der Schlange
>
> ...
>
> The snake is chasing the tortoise. The snake is behind the tortoise. The pig is chasing the snake. The pig is behind the snake ....
>
> (Grüter, 2006a: 302-3)

Learners were then asked a series of questions in the present tense. Learners had to tick the correct answer(s) on a multiple choice sheet. They were told in advance that there may be more than one correct answer and to tick all that apply. There were 10 present tense questions and 10 distractors. In the past tense condition, learners were shown the same pictures, which they were asked to memorize. Then the picture was taken away and the learner was asked two wh-questions. After trying to answer the two questions, the learner was shown the picture again and the questions were repeated. The learner could correct his/her previous answers. As only the corrected answers were counted, Grüter argues that this negates the effect of memory in the task whilst making the use of the past tense pragmatically appropriate. Again learners gave their answers by ticking on the multiple choice sheet and there were 10 test items in this condition.

The results were coded as "subject only' response" ,"object only", "both subject and object" and "neither". For the native speakers of German there is a strong bias to either "both subject and object" interpretations or "object only" interpretations in both present tense and past tense conditions. For the L2 learners, "subject only" interpretations were strongly preferred in the present tense but "object only" in the past tense. The table below gives the percentages for each group and condition.

	Present tense		Past tense	
	L1	L2	L1	L2
subject only	16.0	71.2	7.3	2.4
object only	43.3	28.8	47.3	97.1
both	40.7	0	45.3	0.6

Table 3.3: Summary of results: interpretation of questions in L2 German Grüter (2006a: 308, figure 3)

For both individuals and as a group, the difference in responses between present tense and past tense conditions were significant in the L2 group but not for the L1 controls. In the present tense condition, both FT/FA and Minimal Trees predicted that learners would prefer subject only answers and this is what the results show. For past tense questions only FT/FA predicted that learners would prefer object only answers. Grüter argues that these results support the FT/FA account of the Initial State over that of Minimal Trees in that at least some functional structure and not just VP has transferred.

These three studies, using a range of methodologies and language combinations, have all supported FT/FA. However, FT/FA has been subject to certain criticisms, which I will turn to now before considering alternative theories to FT/FA.

3.2.1.2 Criticisms of FT/FA

The Full Transfer/Full Access hypothesis has been subject to several criticisms. The majority of the criticisms that are based on empirical data, come from proponents of alternative theories, for example Vainikka and Young-Scholten

(1996). As the criticisms of FT/FA from empirical work are generally the same as those supporting an alternate theory such as Organic Grammar/Minimal Trees proposed by Vainikka and Young-Scholten (1994, 1996), which will be reviewed in the next section, I will concentrate at this point on the more conceptual issues surrounding FT/FA. The general argument of the empirical criticisms according to Vainikka and Young-Scholten is that FT/FA does not reflect the "ordered appearance of functional element in learners' production" (Vainikka and Young-Scholten, 2002: 712). To this end, Vainikka and Young-Scholten have argued that the claims of FT/FA are too strong and that learners go through stages of acquisition in a similar fashion to L1 children. However, White (2003) highlights a conceptual and perhaps more fundamental problem, with the FT/FA account; namely how can FT/FA be falsifiable? If L2 learners do not show L1 effects, then advocates of FT/FA can claim that the learner is not at the Initial State or that re-structuring by access to UG has already happened (White, 2003: 67). One way in which FT/FA may be falsifiable, according to White (2003), would be to consider L2 learners from distinct L1s. If these learners show the same Initial State and early stages despite differences in L1s with respect to a particular phenomenon, then it could be counter-evidence (White, 2003: 67). Schwartz (p.c.) argues that another way of falsifying FT/FA would be to show a lack of access to UG - if the learners exhibited a so-called 'wild-grammar'. This would only provide evidence that UG was not involved in L2 acquisition and would not distinguish between different UG-constrained theories of L2 Initial State.

3.2.1.3 Predictions for English learners of French

The FT/FA hypothesis makes several empirically testable predictions about what will constitute the nature of the Initial State for English speaking learners of L2 French. These can be summarized as follows:

- Functional categories will be present from the outset.

- There will be evidence of L1 transfer in functional categories, i.e. L1 English learners of French will initially hypothesize a weak uninterpretable tense feature so adverbs and negation may appear pre-verbally.
- Re-setting to the target L2 feature is possible given sufficient input.

Fuller details of the specific predictions made by FT/FA and the other theories outlined in this chapter, will be discussed in the Methodology chapter. In that chapter I will detail the specific hypotheses that my study will address and what evidence from my study would be required to support each hypothesis.

3.2.2 Organic Grammar, formerly Minimal Trees

In 2005, Vainikka and Young-Scholten revised their previous 1994, 1996 "Minimal Trees" account of the L2 Initial State under the new name "Organic Grammar". This approach argues that the L2 initial state comprises the lexical categories from the L1 and full access to UG and combines the Initial State with a structure building approach to development. Organic Grammar is founded on 10 basic assumptions laid out below which were implicit in Minimal Trees (Vainikka and Young-Scholten, 2005: 87-88).

- Assumption 1: Each language has a so-called Master Tree that includes all possible projections occurring in the language.
- Assumption 2: All and only those projections occur in the Master Tree for which there is evidence in the language.
- Assumption 3: Universal Grammar provides the tools for acquiring the Master Tree, based on input.
- Assumption 4: The Master Tree is acquired from the bottom up.
- Assumption 5: The Acquisition-Syntax Correspondence: syntax mirrors acquisition.

- Assumption 6: Actual instantiations of the tree are projected from the bottom up, based on the Master Tree.
- Assumption 7: Partial Trees may be projected for constructions which do not involve the full Master Tree structure.
- Assumption 8: Lexical and functional projections differ in terms of how they are represented in the grammar.
- Assumption 9: Cross-categorial generalizations about structure are possible.
- Assumtpion 10: Only as much adjunction is posited as necessary.

Vainikka and Young-Scholten (henceforth VYS) argue that both L1 and L2 learners build the structure of the tree in the same way, i.e. learners initially posit only lexical projections and then gradually build functional projections in a similar fashion to the 'weak continuity' or 'structure building' approach for first language acquisition outlined in section 3.1. Clahsen (1990) analyzed German L1 data and argued that L1 children initially project an under-specified FP then IP and finally CP will develop. The difference between L1 and L2 learners lies in the fact that the L2 learner already has an L1 and therefore VYS argue that the L2 learner initially uses their L1 lexical projections and subsequently project an under-specified FP. Therefore, L2 adult learners initially project VP only. This would mean, for example, that speakers of an SOV language would initially project an SOV structure for the L2 regardless of whether the L2 was SOV or SVO.

VYS base their account on both cross-sectional and longitudinal production data (Vainikka and Young-Scholten, 1994, 1996). The learners were considered as naturalistic learners as they did not receive any substantial formal instruction. The cross-sectional data comes from 6 Korean speakers, 6 Spanish speakers and 11 Turkish speakers. The longitudinal data is from one Spanish speaker, 4 Italian speakers and 3 English speakers. VYS counted the mean percentage of

head final VPs supplied by the Korean, Turkish, Spanish and Italian learners (Vainikka and Young-Scholten, 1996: 14-15). They argue that the Korean and Turkish learners have transferred their L1 head final settings to their L2 German in 98% of occasions whereas the Spanish and Italian learners use their L1 head initial settings and only supply head final VPs in 19% of contexts. However, as the examples below show, within the VP stage, these Italian and Spanish learners switch their VP from head-initial to head-final. At this stage their mean percentage of head-final VPs increases from 19% to 64% (Vainikka and Young-Scholten, 1996: 16)

(3.42) *Ich sprechen die meine Firma. (L1 Italian, file 3)*
I speak-INF the my firm
'I speak to/at my firm'
(Target: Ich spreche mit meiner Firma)

(3.43) *Vielleicht Schule essen. (L1 Italian, file 6)*
maybe school eat-INF
'Maybe (he/she) eats at school'
Target: Veilleicht isst sie/er in der Schule)

The differences in the VP stage between learners with SOV L1s (e.g. Turkish and Korean) and SVO L1s (e.g. English, Italian and Spanish) can be represented as shown in figures 3.5 and 3.6. In figure 3.6 the VPi stage represents the switch in headedness from head initial to head final.

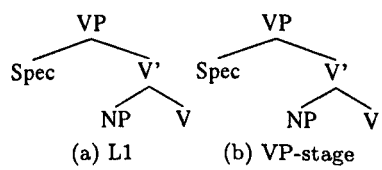


Figure 3.5: Korean and Turkish (SOV) speakers' Initial State (Vainikka and Young-Scholten, 2005: 89, example 14a)

VYS argue that the bare VP stage is characterized by a lack of the following five properties (Vainikka and Young-Scholten, 1996: 16):

- verb raising

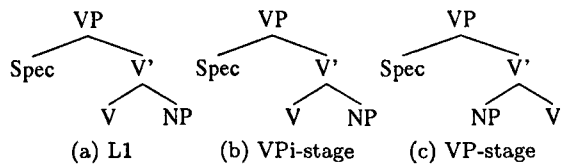


Figure 3.6: English, Italian and Spanish speakers' Initial State (SVO) and second sub-stage (Vainikka and Young-Scholten, 2005: 89, example 14b)

- auxiliaries and modals
- an agreement paradigm
- complementizers
- WH-questions

It is important to note that VYS concede that for the Italian and Spanish speakers, whose L1 permits verb raising, "it is impossible to determine based on word order exactly how much verb raising occurs at this stage" (Vainikka and Young-Scholten, 1996: 17). They examine this by considering the placement of adverbs and negation. They found only nine instances of sentence internal adverbs and ten of sentence internal negation. Preverbal negation and adverbs were discounted as, they argue, it is difficult to determine whether they are part of the sentences or not[7]. VYS argue that as in 9/10 instances of sentence-internal negation counted negation preceded the verb, it suggests that verb raising has not taken place[8].

(3.44) *Für mei Junge immer vo mir schimpfe. (L1 Spanish)*
for my boy always from me scolds
'My boy always scolds me'

[7]It should be noted, however, that L1 transfer of NegP from the Romance languages involved, i.e. Italian and Spanish, would involve preverbal negation and a NegP projection above VP or according to Zanuttini (1997), as mentioned in the previous chapter, NegP above Tense (TP).

[8]These examples could also be consistent with projection to IP, which is head-final in German as both adverbs (Cinque, 1999) and negation (Pollock, 1989) are associated with IP then their presence suggests some form of IP projection. It is not possible to rule out that these examples may, in fact, represent a later stage in which learners have built the structure as far as IP.

(Target: Mein Junge schimpft immer mit mir)

(3.45) *Nein en matina nix essen. (L1 Italian)*
no in morning(It) not eat-INF
'(I) don't eat in (the) morning'
(Target: Nein, morgens esse ich nichts)

Once this initial VP is established then VYS argue L1 and L2 learners progress in the same structure building fashion, gradually building up the syntactic representation. VYS argue against a role for L1 transfer of functional features. If the functional features were to transfer, then, VYS argue, learners of different L1s would go through different stages in development. For example, the Korean and Turkish learners would produce head-final functional projections in German and the Italian and Spanish learners would produce head-initial. VYS claim that this is not what they found in their data but rather:

> all our L2 learners acquire functional projections in a manner which is not only similar to each other but is also similar to the manner in which German children acquire functional projections. (Vainikka and Young-Scholten, 1996: 22)

Instead, VYS posit that learners project a head-initial FP In the same way as L1 German learners (Clahsen, 1990). Crucially this is distinct from IP as in German IP is head-final. This FP projection is not a fully specified IP projection as the agreement paradigm has not been acquired.. VYS argue that IP is only projected once agreement has been established (Vainikka and Young-Scholten, 1996: 21) [9] This underspecified FP is triggered by an emerging use of modals and auxiliaries as well as optional verb raising but the agreement paradigm has not yet been acquired as shown in the example below (Vainikka and Young-Scholten, 1994: 289):

(3.46) *Jetzt brau Wohnungsamt fragen. (L1 Turkish)*
now need-0/1SG housing-authority ask-INF
'Now (I) need to ask (the) housing authority'

[9] However, compare this with Prévost and White (2000), which will be discussed in a later section post-Initial State theories.

(Target: Jetzt brauche ich die Wohnungsamt fragen)

VYS summarize this FP-stage as having the following features (Vainikka and Young-Scholten, 1996: 21):

- optional verb raising
- some auxiliaries and modals
- lack of an agreement paradigm
- lack of complementizers
- lack of WH questions

Learners next project IP. However, this is not target IP according to VYS as it is head initial and German IP is head final. These learners have acquired the agreement paradigm, which VYS take as further evidence of the projection of IP and that this stage is distinct from the FP stage (Vainikka and Young-Scholten, 1994: 286)

(3.47) *Er hat gesagt, nimmst du Lokomotive? (L1 Korean)*
he has said take-2SG you train
'He said (will) you take (the) train?'
(Target: Er hat gesagt, nimmst du die Lokomotive?)

(3.48) *Warum du hast mir viele gefragt? (L1 Turkish)*
why you have me much asked
'Why have you asked me so many questions?'
(Target: Warum hast du mir so viele Fragen gestellt?)

VYS argue this stage is head initial IP rather than (target like) head initial CP. In embedded clauses in German, that is a CP with an IP complement, IP is head final. For VYS's learners these embedded clauses are not head final, thus VYS posit a head initial IP at this stage. The instances of embedded sentences are low. Vainikka and Young-Scholten (1994: 287, fn 40) report that of the six learners they suggest are at this stage (the six most advanced), only three (two L1 Turkish learners and one L1 Korean) produced any embedding with overt

complementizers. The L1 Korean learner used *weil (because)* on one occasion, One L1 Turkish learner used *weil* twice and the other L1 Turkish learner used *wenn (when/if* on three occasions. On each occasions the embedded sentence was in "matrix word order" (ibid). VYS acknowledge that in the L1 acquisition of German, this head initial IP stage is not attested as children use head final IP in embedded sentences as soon as embedding occurs (Vainikka and Young-Scholten, 1994: 288).

This stage is characterized by (Vainikka and Young-Scholten, 1996: 23):

- verb raising frequent
- auxiliaries and modals common
- agreement paradigm acquired
- some embedded clauses with complementizers
- some complex WH questions

The data collected by VYS do not show a complete CP stage. They argue that the evidence, as shown in the examples above, demonstrate that the learners are in the process of acquiring CP but at the time of data collection, CP was not fully established (Vainikka and Young-Scholten, 1996: 23). The stages for L2 learners of German are characterized below and by extension, as French allows verb raising then English learners of French should go through the same/similar stages:

Criteria/Stage	VP	FP	AgrP	CP
verb raising	none	optional	frequent	obligatory
overt pronominal subjects	few	some	common	obligatory
modals, auxiliaries	none	some	common	obligatory
agreement paradigm	lacking	lacking	acquired	acquired
complementizers	none	none	some	yes
question formation	only formulaic	only formulaic	some	yes

Table 3.4: VYS: gradual emergence of functional morphology and projections in L2A (Vainikka and Young-Scholten, 2005: 91, table 4)

VYS argue that regardless of L1, all of their learners progress through these stages in the same way, i.e. once the bare VP has been set as head final the L1 does not play any further role in L2 development. VYS summarize their Organic Grammar/Minimal Trees hypothesis as follows:

> Yet while L2 learners use their native-language VP to establish a toe-hold in the L2, they only make use of their native language to the extent that they transfer their VP. After this point, higher functional projections develop through the interaction of X'-theory with the input. The initial state in L2 acquisition is thus not equivalent to the learner's entire knowledge of the L1. (Vainikka and Young-Scholten, 1996: 13)

One of the criticisms of Organic Grammar has been the presence of Wh-questions in the early productions of L2 learners of German, which critics take as evidence of CP in the Initial State (Schwartz and Sprouse, 1996). In a 2002 paper, Vainikka and Young-Scholten addressed this issue directly. Using data from two teenage American exchange students who were recorded orally throughout their one year stay in Germany, VYS argue that apparent wh-questions in the early stages are not underlying CP projections but rather involve adjunction to VP (Vainikka and Young-Scholten, 2002: 717). In a task to elicit questions during their second month of residency in Germany, the learners were given a wh-word and an infinitive and asked to make questions. The examples given below are taken from Vainikka and Young-Scholten (2002: 717).

(3.49) *Warum sprechen Deutsch? (Joan, II)*
why speak-INF German
'Why speak German?'
Target: Warum spricht man Deutsch?

(3.50) *Wo du fahren? (Paul II)*
where you drive-INF
'Where are you driving'?
Target: Wo fahrst du?

This analysis of VP adjunction is similar to arguments put forward by Radford (1990) for early L1 acquisition. The next stage in the acquisition of wh-questions emerges when the learners have established IP, as defined above. At this stage, however, wh-questions are not assumed to be adjunction to VP but rather topicalization or scrambling to IP as this projection is now available. Examples of this stage are given below (Vainikka and Young-Scholten, 2002: 718)

(3.51) *Wo kannst du kaufen? (Joan IV)*
where can you buy
'Where can you buy (that)?'
Target: Wo kannst du das kaufen?

(3.52) *Wo hat das Buch gekauft oh no, Wo hat sie Buch kaufen? (Joan IV)*
where has the book bought oh no where has she book bought
'Where did she buy the book?'
Target: Wo hat sie das Buch gekauft?

(3.53) *Was uh hast er getrunken? (Paul IV)*
what have-3SG he bought
'What did he drink?'
Target: Was hat er getrunken?

Crucially Vainikka and Young-Scholten argue that these sentences cannot be examples of adjunction to IP as the learners are producing object questions.[10] VYS account for the last example with the structure shown in figure 3.7:

VYS extend this IP analysis to sentences with embedded clauses. They argue that it is possible, following work by Tavokolian (1981) with L1 children that the L2 learners analyze complementizers in embedded clauses as conjunctions instead, therefore joining two IP projections without CP or that learners project a head-initial CP while still projecting a (non-target like) head initial IP. See example 3.54 (Vainikka and Young-Scholten, 2002: 719):

[10]This argument suggests that learners do not use object questions at the VP stage. However, compare with Grüter (2006b), Grüter and Conradie (2006) discussed above on how learners can comprehend object questions at the VP stage.

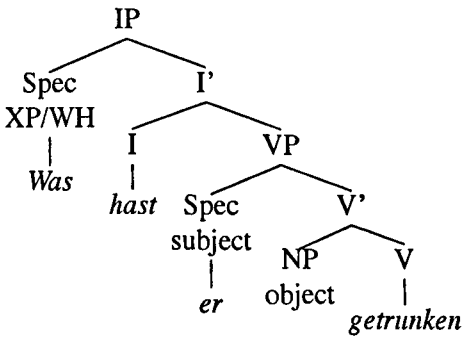


Figure 3.7: Object wh-questions at IP stage (Vainikka and Young-Scholten, 2002: 717, ex.7)

(3.54) *Ja, ich denke, dass ich habe ja veilleicht Freunden schon*
yes I think that I have yes perhaps friends already
gemacht. (Joan Vii)
made
'Yes I think that I have perhaps already made friends'

VYS argue that when CP emerges, these learners use two different CPs. The first is a non-target head-final CP used with embedded wh-questions and the other is the target-like head initial CP with head final IP. By the end of their one year stay in Germany, one of the two learners (Joan) has established a head-initial CP with head final IP but the other (Paul) still appears to be using two distinct CP projections. VYS conclude:

> Despite evidence that learners produce WH-questions from the very start of their exposure to a second language, these early questions do not require the projection of a CP, thus posing no threat to the [Organic Grammar] approach. Learners make use of the syntactic projections available to them in their successive interlanguage grammars to form WH-questions. (Vainikka and Young-Scholten, 2002: 721)

Organic Grammar, and its previous incarnation as Minimal Trees, has also received empirical support in the L2 literature. In the next section, I will re-

view three studies which argue for Organic Grammar, generally in opposition to FT/FA as detailed above, before outlining some conceptual and empirical criticisms of this approach.

3.2.2.1 Support for OG

Several studies have argued in favour of the Organic Grammar approach. In this section I will discuss three recent studies all looking at learners in the very initial stages of L2 acquisition.

Myles (2004, 2005b) argues that the competence of beginning L2 learners is often "over-represented" in L2 theories, such as FT/FA, as learners make extensive use of lexically stored chunks or formulaic sequences, which give the erroneous impression that functional categories are present from the outset. Apart from these chunks, Myles argues that only lexical categories are present, i.e. functional categories are not, and supports Minimal Trees (now Organic Grammar) (Vainikka and Young-Scholten, 2002).[11] Myles follows Wray's 2002 definition of a formulaic sequence as:

> a sequence, continuous or discontinuous, of words or other elements, which is, or appears to be, prefabricated: that is, stored and retrieved whole from memory at the time of use, rather than being subject to generation or analysis by the language grammar (Myles, 2004: 141).

Identification of a chunk can be difficult. Myles et al. (1999) uses the following set of criteria. Examples from instructed English speaking learners of French are taken from Myles (2004: 142-3, ex. 1-3):

- Greater length and complexity of sequence compared with other learner output, usually well formed. (Both examples are from the same learner during a single elicited production task)

[11] Myles (personal communication) argues her findings are also consistent with Modulated Structure Building, which will be discussed in section 3.2.3.

(3.55) *Quel âge as- tu?*
what age have-2SG you
'How old are you?'

(3.56) **Il âge frère?*
he age brother
'How old is your brother?'

- Often used inappropriately (syntactically, semantically, pragmatically).

(3.57) **Mon petit garon euh où habites- tu?*
my little boy umm where live-2SG you
'Where does your little boy live?'

However, as Myles (2004) points out, this means that determining a chunk has to be done on an individual basis, i.e what constitutes a chunk for one learner may not be a chunk for another and that these chunks may change over time. She further continues that in order to determine if something is a chunk, that both the learner's performance that that given point and "over of the course of this development for this particular learner" must be considered (Myles, 2004: 143). This obviously makes determining chunks in cross-sectional work more difficult.

Myles (2005b) examined the development of morpho-syntactic structure in 14 instructed English speaking L2 learners of French. She concentrated on the presence or absence of verbs, verbal morphology, the context of verbal use (finite versus non-finite), the type of verb (thematic, auxiliary etc) and the use of subject clitics. The task consisted of an oral re-telling of a narrative based on a series of pictures. The learners were first told the story by the researcher whilst looking through the pictures. The learners were asked to re-tell the story and were given vocabulary items if needed. The task was part of a larger battery of tasks and the learners were recorded doing this task after one year of instruction and then the task was repeated one year later. The task was designed to circumvent the use of chunks by the learners as they were to use the third person (in saying what the person in the picture is doing) and could not rely on "classroom routines". The task also required the learners to use a lot

of verbs to describe the different actions (Myles, 2005b: 94). Any chunks which were used, for example "*Je ne sais pas*" (I don't know) were excluded from the analysis.

The results show that the percentage of utterances containing a verb out of the total number of utterances rose for 13/14 learners between the first and second data collection. On average learners produced 55% of utterances with a verb at the first data collection (range = 28.6%-83.8%, n=7-57) and at the second data collection, the average was 76% (range=25%-100%, n=10-43). This difference was statistically significant. The second data collection results are eschewed somewhat by one learner who only produced 25% of utterances with a verb whereas the others were all above 51.9%. In terms of suppliance of verbal morphology, Myles considered the suppliance of finite and non-finite verbs. Again there was a significant increase in the proportion of finite verbs used between the first and second data collection. At the first data collection, finite verbs were used on average on 51.6% of occasions (range = 0-100%) and at the second data collection they were used on average on 56.4% of occasions (range = 0-87%). It should be noted that those learners who produced 0% finite verbs, produced very few verbs in general. Myles also reports on the use of subject clitic pronouns. Subject clitics are rare in the data with lexical NPs being used instead. There are only 15 examples of subject clitic use at the first data collection and 19 at the second. However, of these 34 examples, 31 are in finite contexts (91.2%)and 3 are non-finite. The subject clitics used in finite contexts mainly come from 3 learners, who use five or more clitics (one learner used 15) between the two sessions. These results are similar to those found in L1 acquisition (Myles, 2005b: 104). Myles (2005b) argues that the development in the amount of verbs between the first and second data collection as well as the increase in the proportion of finite verbs between the two collection points both argue for a gradual development in the syntactic representations constraining the L2 learner. She argues that learners initially go through a verbless stage before positing a bare VP. Learners then project IP as evidenced by the use of

subject clitics with finite verbs.[12] She concludes:

> Learners project lexical categories only initially, and their projection of functional categories is linked to the appearance of free grammatical morphemes and subject clitics. Early L2 development of verb morphology has also been shown to be similar in important ways to that of children learning French as a first language. (Myles, 2005b: 110)

As discussed in the section on criticisms of the FT/FA approach, (White, 2003: 67) suggested one way to argue against FT/FA and which could potentially provide evidence for Organic Grammar would be to consider learners from typologically different L1s learning a second language and examine if the learners go through the same stages of development. This is the rationale behind Yuan (2001), who considers English, French and German speakers learning Chinese in relation to thematic verb placement.

Mandarin Chinese is an SVO language, which does not permit verb raising. English is also a non-verb raising SVO language but French and German both require verbs to raise. In French, as outlined in chapter 2, all verbs must raise to IP. In German, as discussed above, verbs in declarative main clauses must raise to CP, in embedded clauses to IP. The placement of the verb can easily be seen in relation to adverb placement so Yuan examines the use of frequency adverbs (e.g. often, sometimes) in main clauses. These adverbs in French and English can appear at both the beginning and the end of the sentence, as has been discussed in chapter 2. In German and Chinese, adverbs can appear at the beginning of the sentence (in German with V2) but not at the end, i.e. *S-V-O-Adv[13]. The differences between the four languages are shown in the following table:

[12]Myles makes no claims about L1 transfer and therefore her account is also compatible with Modulated Structure Building to be outlined in section 3.2.3.

[13]In German adverbs can appear at the end of sentences when the object has moved to initial position and there is no other intervening material, i.e. Obj-V-S-Adv but *Obj-V-S-X-Adv

Word Order	French	German	English	Chinese
Adv-S-V-O	✓	X	✓	✓
Adv-V-S-O	X	✓	X	X
S-Adv-V-O	X	X	✓	✓
S-V-Adv-O	✓	✓	X	X
Obj-V-S-Adv	X	✓	X	X

Table 3.5: Differences in adverb placement in French, German, German and Chinese (Yuan, 2001: 254, table 1)

Yuan tested 48 French native speakers, 51 German native speakers and 67 English native speakers, who were all undergraduate students learning (Mandarin) Chinese as well as 10 Chinese native speaker controls. The learners were grouped according to proficiency and the beginner groups for each L1 had been learning Chinese for on average 3-6 months. Each subject was given an oral production task and a grammaticality judgement. The oral production task required the learners to produce 10 sentences with an adverb and the judgement task had 6 tokens relating to adverbs. Both of these tests examined other areas of syntax in addition to adverb placement. The results show that all groups, regardless of L1, performed like native speakers in both the oral production and judgement task (88%-100% production and acceptance) of S-Adv-V-XP. Yuan argues that there is no evidence of L1 transfer in the functional domain as there is no evidence of verb raising in either the production task or the judgement task. Yuan suggests that this is counter-evidence against FT/FA. He claims that this study does not support Organic Grammar/ Minimal Trees as OG predicts that L2 learners would automatically allow optional verb raising even if the L2 does not have verb raising (Yuan, 2001: 264)[14]. However, as there are no differences between learners of different L1s in this study, then this would support the hypothesis that there is no transfer of functional categories from

[14]In Yuan's study he argues that under OG/MT verb raising would be optional although under a recent OG paper, Vainikka and Young-Scholten (2009) argue that verb raising is obligatory, i.e. if there is an empty head (e.g. FP) then the verb will raise to fill it. This argument has been developed to account for apparent L1 transfer effects in French learners of English (White, 1991b,a).

the L1 and supports some of the claims made by Organic Grammar.

In a recent study, Romano (2008) examines subject-verb agreement in L2 English and L2 Italian in light of the predictions made by Organic Grammar. He suggests that under Organic Grammar, the following three predictions would be made:

1. Agreement is acquired in the order: Copula >lexical verbs & auxiliaries in both main and subordinate clauses.

2. Group scores for each morpheme will differ significantly.

3. Development will proceed in stages and "should fit percentages exactly (i.e. 0-33%, 34%-66%, 67%-100%), rate of change should be considerable and little to no optionality".

Romano tested 14 adult L2 learners of English and 18 adult L2 learners of Italian. He divided each group into 3 subgroups: top, middle and bottom. The L2 English group were divided according to their Oxford placement test score and the L2 Italian group according to their amount of instruction/exposure and score on a gap-fill exercise. These results are summarized below (taken from handout):

	English		Italian		
	Subjects n=14	mean OPT score	Subjects n=18	mean gap-fill score	instruction hours (mean)
Top	n=6	30	n=9	93	92
Middle	n=5	23.6	n=4	60	45.5
Bottom	n=3	14.7	n=5	19.5	16

Table 3.6: Participants in Romano (2008)

Romano examined subject verb agreement in third person singular and plural with copulas, lexical verbs and auxiliaries. Unlike English, Italian is a morphologically rich language with different morphology according to person and number. He used a multiple choice grammaticality judgement task, a gap-fill requiring the use of verbal morphology and a (written) sentence completion task. He found that for the L2 English group, subject verb agreement with

copula 'be' was acquired before subject verb agreement with lexical verbs and auxiliaries. Apart from 2 learners who "seem to be misplaced", Romano found statistically significant differences between the top and bottom group on the use of different morphemes and also found that the use of affixal morphology (i.e. 3rd person singular 's') increased "rapidly at the expense of bare forms". He argues that these results support the overall predictions of Organic Grammar. For the L2 Italian group, Romano found that for the bottom group there was a disparity between subject verb agreement with the copula and subject verb agreement with lexical verbs and auxiliaries as the copula emerged first. The results of the bottom and middle groups show a "sudden rise" in the use of subject verb agreement with lexical verbs and auxiliaries. The bottom group supplied subject verb agreement with lexical verbs at 3.13% on the sentence completion task but this rose to 68.75% with the middle group. Romano argues this suggests "a very expedite FP stage". He argues that these results from L2 Italian again support the predictions of Organic Grammar as they clearly show an stage with subject-verb agreement only with copulas before subject verb agreement with lexical verbs and auxiliaries. He did not find evidence of optionality at any stage and that group scores for each morpheme did differ although not all differences reached statistical significance. This may be due to the small numbers of participants in his sample.

The studies reviewed in this section have argued in favour of Organic Grammar (or Minimal Trees). However, some authors have argued not only in favour of alternate theories (see for example the proponents of FT/FA outlined above or Modulated Structure Building, which will be discussed later) but have highlighted certain conceptual issues with the Organic Grammar/ Minimal Trees approach. The next section will deal with some of these issues before I turn to the final theory of the Initial State to be tested in this thesis.

3.2.2.2 Criticism of OG

As previously mentioned in the section on FT/FA (section 3.2.1), Schwartz and Sprouse (1996) have criticized the Organic Grammar theory of the L2 Initial State and subsequent development on conceptual as well as empirical grounds. Empirically, they argue that Organic Grammar does not account for the amount of L1 transfer in the functional domain that they argue characterizes the L2 Initial State. However, in this section I will deal with the more conceptual arguments leveled against Organic Grammar/ Minimal Trees. Schwartz and Sprouse (1996) query the motivation of why L2 learners, who have both lexical and functional categories in their L1, would start acquiring the L2 with only lexical categories. They do not dispute that this may be the case of L1 acquisition, as per the 'Weak Continuity Hypothesis' but they argue:

> It is difficult to imagine what sort of cognitive mechanism would be involved in extracting a proper subpart of the L1 grammar and using that proper subsystem as the basis for a new cognitive state. (Schwartz and Sprouse, 1996: 66)

White (2003) points out that Vainikka and Young-Scholten assume that morphology acts as a trigger for the acquisition of functional categories. This means that the absence of morphology is taken to indicate the absence of syntax. As will be discussed in the section on post-Initial State theories this assumption has been challenged (see for example, Lardiere, 1998, 2000, Prévost and White, 2000). The result of this morphological requirement means that unlike native German, which has verb final VP and IP and a head initial CP, Vainikka and Young-Scholten have to argue that learners project head initial FP and IP in order to account for SVO data that under an analysis which did not rely on the presence of morphology to determine the presence of syntax, could argue that the verb was in CP as per adult German (White, 2003: 76-7).

One final conceptual criticism of Organic Grammar according to White (2003) is the use of 60% suppliance in obligatory contexts as a criteria for

acquisition as "it is not clear what a criterion of 60% achieves" (White, 2003: 78). This criticism, however, is not unique to Organic Grammar but rather can be leveled at any such criteria as they are, by their very nature, arbitrary.

3.2.2.3 Predictions for English learners of French

- Initial stage with no evidence of functional projections - i.e. a bare VP with no tense or agreement beyond default forms.
- Functional projections will emerge gradually.
- No L1 transfer of functional projections, i.e. once tense is acquired then verb raising should be obligatory (at least 60% on VYS criteria): negation and adverbs should follow the finite verb.
- Free morphology will be acquired before bound morphology

3.2.3 Modulated Structure Building

Hawkins (2001a) proposed a combination of the two approaches outlined above and that a middle ground is possible. He calls this "modulated structure building", henceforth MSB. This theory argues that initially only lexical categories (VP, AP, NP, PP) transfer. Functional categories are triggered by positive evidence and development "proceeds incrementally" (Hawkins, 2001a: 75). This is the same as the Organic Grammar/ Minimal Trees hypothesis. However, MSB differs from Organic Grammar/ Minimal Trees in that it posits a role for the L1 in the development of functional categories. This is consistent with Full Transfer/Full Access. Hawkins states:

> syntactic properties of the L1 transfer into the L2 grammar (as in Full Transfer/Full Access), but only at points of development where the relevant property emerges as part of the general sequence of development. (Hawkins, 2001a: 75).

Hawkins supports this hypothesis using evidence from early Japanese and Spanish learners of L2 English in the studies by Shapira (1976) and Stauble (1984). Hawkins reports that for both the Spanish and Japanese learners there was a high proportion of *no*+zero copula use. Hawkins analyses this as a lexical negation projection, based on anaphoric negation (no) which takes an lexical XP complement. This is shown in examples 3.58 & 3.59 below (Hawkins, 2001a: 97):

(3.58) [$_{NegP}$ I [$_{Neg}$ no [$_{AP}$ call anymore]]]

(3.59) [$_{NegP}$ she [$_{Neg}$ no [$_{AP}$ old]]]

Hawkins terms this NegP but under his analysis in these early stages it is a lexical projection and not a functional projection associated with IP. It is therefore qualitiatively different from NegP in the adult grammar and as outlined in the previous chapter. Under this analysis *no* is in the head lexical NegP position. Hawkins argues that once copula *be* is established, thus triggering IP, then learners switch to *not/n't* and there is a corresponding decrease in the use of *no* + lexical projection. Hawkins claims that learners move through three stages in regards to negation: from predominantly *no*+zero copula to predominately *be*+*no* to *do*-support with negation. This shift from 'no' to 'not/ n't' "could be construed as a shift in learners' mental grammars from treating negation lexically to treating it functionally, once the functional category I emerges" (Hawkins, 2001a: 123, fn 5).

In the data Hawkins examines he does not find examples of verb raising by the Spanish speakers, i.e. they do not transfer that property of their L1 to their L2 English. Hawkins does not dismiss the Full Transfer/Full Access aspect of MSB in light of this evidence. Rather he states that:

> Modulated structure building predicts, following the 'Full Transfer/Full Access' account, that there will be L1 influence in principle at the point where the relevant property of the functional category is emergent. This appears not to be the case for the Spanish speak-

ers acquiring English sentential negation. ... Perhaps this is another area where there is L1 influence in principle, but the nature of the evidence available to the L2 learner overrides that influence.(Hawkins, 2001a: 102-3)

Hawkins proceeds to consider data from Devitt (1992), whose study consisted of five subjects learning French in a naturalistic environment. There are two English speaking learners of L2 French and Hawkins concentrates on them. In this study a different result is found to the one outlined above. It should be noted that these two learners are aged 11 1/2 and 8 upon arrival and attended school in France when they arrived. The learners do not appear to pass through a lexical projection only phase but rather IP seems to be instantiated very early in their grammars (Hawkins, 2001a: 105). Table 3.7 represents the number of negative sentences uttered by the learners in their spontaneous natural productions in the first few months following their arrival. M & A stand for the names of the two learners involved.

Sample		1	2	3	4	5	6	7	8	9	10	11
Thematic verbs												
(ne) V pas	M	1	10	1	2	10	2	7	5	11	2	22
	A		1	1		1		3	9	5	10	
ne V	M	0	6	0	1	1	0	0	0	0	0	0
	A		0	1		0		0	0	0	0	
pas V	M					no examples						
	A					no examples						
Copula												
(n')est pas	M	0	0	0	0	1	0	1	0	2	0	2
	A		0	0		0		0	0	0	1	
n'est						no examples						
pas est						no examples						

Table 3.7: Number of negative sentences by type Hawkins (2001a: 104: table 3.4)

As there is verb raising over 'pas' and an absence of 'pas V' utterances, Hawkins concludes that IP must be available to these learners. As this data was collected from the beginning of the learners' exposure to French, Hawkins concludes that there is no clear evidence of a "lexical stage" as per the structure

building part of MSB. However, Hawkins argues that the 'V pas' order may not in fact be actual verb raising and the re-setting of this parameter from the L1 English weak value to the L2 French strong one. His argument is based on work by Hawkins et al. (1993) that shows a disparity between negation and adverb placement in English learners of French and by French learners of English, who do not permit raising with negation but allow it with adverbs (White, 1992). Hawkins argues that for French learners of English the input they receive reinforces the "lexical projection analysis for sentential negation" (Hawkins, 2001a: 110) but for English learners of French the input counters this 'lexical projection analysis' as 'pas' follows the verb. Hawkins claims that if learners "are sensitive to the complement selectional properties of heads early on, they will recognize the conflict: in French finite clauses Neg does not select a VP complement with a filled head" (Hawkins, 2001a: 111). This UG-constrained analysis accounts for some otherwise problematic data in UG accounts of L2 acquisition. If learners were raising finite lexical verbs with negation but were not allowing verbs to raise over adverbs, i.e. they were raising on a structure by structure basis rather than any kind of parameter re-setting, then this would be precisely the kind of 'wild grammar' that would counter UG involvement in L2 acquisition (Schwartz, p.c.).

Hawkins argues this data supports the MSB account as once IP is established, L1 influence is possible in other areas, for example adverb placement, contra Organic Grammar/Minimal Trees (Hawkins, 2001a: 114).

3.2.3.1 Predictions MSB re: English learners of French

- Initial Stage with no evidence of functional projections - i.e. bare VP with no tense or agreement beyond default forms.
- Functional projections will emerge gradually
- When functional projections emerge there will be evidence of L1 transfer, e.g. SAVO instead of SVAO.

- Learners will re-set to L2 settings with sufficient input.

3.2.3.2 Criticism of MSB

Vainikka and Young-Scholten (2003) criticized MSB on conceptual and methodological grounds. They argue that the only difference between MSB and Organic Grammar is that in MSB when the functional projections emerge, that they are subject to L1 influence. However, VYS suggest that Hawkins does not allow a sufficient role for UG in his analysis of the data which allegedly show L1 transfer in the functional domain. They argue that when learners use structures available in neither the L1 nor L2, this is ascribed to access to UG. However, when learners use structures "similar to either the L1 or the L2" then UG cannot be ignored (Vainikka and Young-Scholten, 2003: 99). Therefore they argue that what appear to be surface L1 transfer effects in the functional domain might actually be access to UG rather than straight-forward transfer. Methodologically, Vainikka and Young-Scholten argue that the studies Hawkins cites to support his argument are often small scale (e.g. Stauble, 1984) and thus it can be difficult to generalize these results. Moreover, they also argue that it is not reliable to compare different experimental methodologies and draw generalized conclusions from them as the test instrument were not the same in the studies Hawkins cites and the learners themselves may not be comparable.

To date, there has only been one empirical study explicitly testing MSB. Jansen (2008) considers instructed L2 learners of German in light of Processability theory (Pienemann, 1987)[15] and MSB. She tested 21 adult English speaking L2 learners of German, who were all enrolled on German courses at an Australian university. The data were collected through an oral production task, in which learners had to speak to a native speaker of German on the topic "Getting to know you". Each recording lasted approximately 45 minutes. Jansen analyzed the data using the predictions made by Processability theory and MSB. She found the following order:

[15]Processability Theory is an alternative theory of L2 acquisition that is not within the UG framework. For further details please see Pienemann (1987).

- SVO: canonical word order
- Adverbs in focus position (no V2)
- Split verbs: S-V(fin) - O- V(non-fin)
- Verb second
- verb final in embedded clauses

She found some problems for the MSB account. According to Jansen the most problematic data for a MSB analysis was the "early emergence of subordinate clause" Jansen (2008: 218). One problem with MSB, according to Jansen, is a lack of criteria for determining acquisition. If a structure is considered to be acquired after one utterance[16], e.g. one example of IP, then Jansen argues that 19 of the 21 learners could be considered to be at the CP stage. If this is true, she argues that "MSB would then have little to offer in terms of explaining the study's findings" (Jansen, 2008: 217). However, Jansen concedes that the learners in her study are not beginner (ab initio) learners and so it may well be the case that they are at a CP stage. Moreover, Jansen claims that the CP stage under MSB must involve the finite verb being at the end of the sentence. However, the defining characteristic of MSB, as opposed to Organic Grammar, is that there can be L1 transfer when a functional category is being acquired. Therefore, when an English speaking learner of German starts using embedded clauses, it is entirely plausible under MSB that there will be evidence of L1 transfer, hence the appearance of CP without verb in final posiiton. Jansen does not give many examples nor details on the amount of instruction by individuals in her group so it is difficult to query her conclusions. She argues that the data are better analyzed by Processability theory than MSB.

The differences between the theories can be summarizes as shown in the table below:

However, this study concentrates not only on the Initial State but due to its cross-sectional design, will also provide data on post-Initial State learners.

[16]This is the criteria in Processability Theory.

	FT/FA	Organic Grammar	MSB
VP only		✓	✓
Functional categories develop		✓	✓
Functional categories from outset	✓		
L1 transfer in functional categories	✓		✓

Therefore, in the next section, I will review three prominent theories of the development of L2 acquisition before outlining several studies in support of each.

3.3 Post-Initial State theories

The theories reviewed in this section do not make explicit their view of the Initial State, although it is possible to hypothesize the extent of L1 transfer they assume to be involved. These theories argue that L2 interlanguage is UG constrained but that problems lie in certain interface areas. As the study to be outlined in subsequent chapters examines beginner, intermediate and advanced learners of French, it is therefore appropriate to address some theories dealing specifically with post-Initial State learners and which attempt to explain ultimate attainment in L2 acquisition. In the following I will outline the Missing Surface Inflection Hypothesis advocated by Prévost and White (2000) and examine several studies supporting this hypothesis before turning to examine the Representational Deficit Hypothesis as proposed by Hawkins and Chan (1997) and again will review three studies supporting it. Finally I will outline a newer hypothesis proposed by Lardiere (2008, 2009) focusing on 'feature re-assembly'. As this recent proposal is the subject of a special issue of *Second Language Research*, I will outline some of the arguments for and against highlighted in this issue.

3.3.1 Missing Surface Inflection Hypothesis

Prévost and White (2000) situate their study within accounts of learner "optionality in their use of inflectional morphology ... during the course of acquisition" (Prévost and White, 2000: 103). In order to examine the use of inflectional morphology they consider data from L2 French and L2 German in terms of the use of finite and non-finite verbal morphology. As has already been discussed in this chapter and in chapter 2, both French and German are languages which require verb raising due to strong uninterpretable Tense features. In French, all finite verb must raise from V to I therefore negation and adverbs appear after the verb. In German, finite verbs in main clauses must raise from V (via I) to C and non-finite verbs remain in a head final VP (see Prévost and White, 2000: 104-5 for discussion). The issue which Prévost and White wish to is address is how this relates to the presence or absence of inflectional morphology. Adapting the term 'missing inflection' proposed by Haznedar and Schwartz (1997), Prévost and White (2000) argue for the 'missing surface inflection hypothesis' (henceforth MSIH). This predicts that verbs with finite morphology are actually finite and will only appear in finite contexts, i.e. in L2 French and L2 German they should be raised over negation for example. Verbs with non-finite morphology may be true non-finite verbs and hence appear in non-finite contexts but they may also be "substitutes for finite inflection" or default forms (Prévost and White, 2000: 111) and appear in finite contexts. Prévost and White (2000) tested these predictions by examining the oral production data of four naturalistic learners. Two were native speakers of Moroccan Arabic learning L2 French and two were native Romance speakers (Spanish and Portugese) learning L2 German. Each learner was recorded approximately once a month for between two and three years. Details of the learners are given in the table below:

Prévost and White first consider the use of finite and non-finite verbs in non-finite contexts. For MSIH, this would predict that finite verbs should not appear in non-finite contexts and the data supports this. Non-finite contexts were defined as being after an auxiliary, preposition or other type of verb, e.g.

	Abdelmalek	Zahra	Ana	Zita
L1	Arabic	Arabic	Spanish	Portugese
L2	French	French	German	German
Age at onset	adult	34	22	17

Table 3.8: Table of Learner details (Prévost and White, 2000: 112, Table 1)

modal. Instances of finite verbs in non-finite contexts were low as can be seen from the table below:

	L2 French				L2 German			
	Abdelmalek		Zahra		Ana		Zita	
	-fin	+fin	-fin	+fin	-fin	+fin	-fin	+fin
Aux + V	180	3	98	0	12	2	32	1
Prep + V	28	3	36	1	22	1	3	0
V + V	26	8	17	1	30	2	35	1
Total	234	14	151	2	64	5	70	2

Table 3.9: Verbs in non-finite contexts (Prévost and White, 2000: 114, Table 4)

While instances of finite verbs in non-finite contexts are rare, for Abdelmalek and Ana they nonetheless occur on between 5.6% and 7.2% of occasions. Prévost and White (2000) argue that in Abdelmalek's case, many of the occurrences are with the construction *il faut* + *V* as shown in examples 3.60 & 3.61 (taken from Prévost and White, 2000: 116)

(3.60) *il faut marche*
it must walk-1/2/3SG
'We must walk'
Target: Il faut marcher

(3.61) *il faut paye*
it must pay-1/2/3SG
'You must pay'
Target: Il faut payer

However, in French the construction *il faut* can be followed by either a non-finite verb, as shown in the target of the examples above or it can be followed by a clause in the subjunctive (introduced by *que* (that)). This can be seen in examples 3.62 & 3.63 (taken from Prévost and White, 2000: 116):

(3.62) *il faut partir*
it must go-INF
'We have to leave'

(3.63) *il faut que nous partions*
it must that we leave-SUBJ+1P
'We have to leave'

Prévost and White argue that Abdelmalek "very often"[17] omits complementizers in finite contexts and also produces "a high number" of subjectless CPs (see examples 3.60 & 3.61). Therefore, in these examples, the finite verb after *il faut* may be a finite verb with a missing complementizer and a missing subject (Prévost and White, 2000: 116). For Ana's L2 German, Prévost and White argue that these examples are always either bare forms or have the first person singular *+e* ending as shown in the examples below (taken from Prévost and White, 2000: 116-7, ex. 12b&13):

(3.64) *du willst nich arbeite hier*
you want not work-1S here
'You don't want to work here'
Target: Du willst hier nicht arbeiten.

(3.65) *ich will diese Jahre fahr nach Spanien mit mein*
i want this year drive-∅ to Spain with my
Eltern
parents
'this year I want to drive to Spain with my parents'
Target: Ich will dieses Jahr mit meinen Eltern nach Spanien fahren

As Prévost and White point out, the use of *+e* can be a regional form of the infinitive and therefore they argue these examples may actually be non-finite (see Meisel (1991) for further discussion of regional variation and L2 German).

Prévost and White (2000) also examine the use of finite and non-finite verbs in finite contexts. In this case a finite context is defined as the use of a verb with negation. In French and German a finite verbs raise over negation but non-finite verbs do not. For all four learners we have examples of non-finite

[17]Prévost and White do not give the actual numbers or percentages of subjectless CPs or omitted complementizers

verbs appearing both before and after negation but for all learners finite verbs "systematically" appear before negation (Prévost and White, 2000: 117). This can be seen in the following table:

	L2 French				L2 German			
	Abdelmalek		Zahra		Ana		Zita	
	V-neg	neg-V	V-neg	neg-V	V-neg	neg-V	V-neg	neg-V
Finite	90	3	135	0	82	2	74	4
non-fin	6	44	7	5	9	12	13	29

Table 3.10: Verbs in finite contexts (Prévost and White, 2000: 117, Table 5)

Prévost and White argue, based on the data presented in these two tables, that there is a disparity between the use of finite verb forms and the use of non-finite verb forms. Finite verbs appear in finite contexts whereas non-finite forms can appear in both finite and non-finite contexts. This difference was significant for all of the learners except Ana, who was independently measured to be the most advanced learner (Prévost and White, 2000: 119). Prévost and White argue that the non-finite forms in finite contexts are not true non-finite forms but are rather default forms thus allowing them to appear in raised positions (Prévost and White, 2000: 119).

Prévost and White also examine the use of agreement. They argue that when agreement is found, it should be correct. They consider the use of subject-verb agreement and French clitic-doubling constructions (where both an overt DP and a subject clitic pronoun are present, e.g *Jean il regarde la télé* (John he watches TV)[18]). Prévost and White determine subject-verb agreement by considering all examples of an inflected verb and establishing if that agreement is correct for the subject of that verb. This methodology differs from those who look at the subject and then see if the verb agrees (Meisel, 1997). For the L2 French learners, subject-verb agreement was correct in over 94.5% of all contexts. The results for the L2 German learners show a lesser degree of subject-verb agreement but it is still high (over 87.8%). The majority of errors come from an over-use of the German first person singular ending *+e*. How-

[18]This structure does not exist in German.

ever, Prévost and White are keen to point out that, given the discussion above, examples of *+e* may in fact be non-finite forms, which would further support their hypothesis (Prévost and White, 2000: 122-3). The use of subject clitics in L2 French is also considered. Prévost and White look at the instances when both a noun and subject clitic occurring with a verb (subject doubling). They suggest that in such contexts subject clitics are agreement markers and should agree in person, number and gender with the noun phrase. They found that in over 86% of such cases, the subject clitic did agree in all features with the noun phrase. It should be noted that if the learner incorrectly assigned the gender to a particular noun (e.g. masculine instead of feminine), the learner was consistent with the use of clitic and this was counted as correct agreement (Prévost and White, 2000: 124). The results can be found in the table below (Prévost and White, 2000: 124, Table 10):

	Abdelmalek		Zahra	
	Agreement	No agreement	Agreement	No agreement
Finite	103	17	111	8
Non-finite	17	2	30	6
Total	120	19	141	14

Table 3.11: Noun Phrase-Clitic agreement (Prévost and White, 2000: 124, Table 10)

In these subject doubling contexts the lack of agreement between the Noun Phrase and the subject clitic was largely due to overuse of the masculine subject clitic *il* in over 95% of cases for Abdelmalek, 78.5% for Zahra (Prévost and White, 2000: 124-5).

Based on the arguments from the distribution of finite and non-finite verb forms in the L2 learner data and the high proportion of accuracy in subject-verb agreement and clitic doubling in French, Prévost and White argue that optionality is actually syntactically constrained and that the underlying syntax of the L2 learners' utterances is not impaired. They argue:

> MSIH makes a clear distinction between knowledge of surface morphology and knowledge of the abstract features underlying move-

> ment. ...Though the L2 learners investigated here produced main verbs with infinitival markers, they also showed knowledge of finiteness and its syntactic consequences with respect to negation, supporting the claim that they have set L2 feature strength to [+strong] (Prévost and White, 2000: 126).

The problem with optionality in L2 lies, therefore, not in the domain of syntax but in its interface with morphology. Prévost and White assume a Distributed Morphology account (see Halle and Marantz, 1993), under which features are checked between the syntactic node and the lexical entry. Prévost and White argue that the syntactic nodes are fully specified but the lexical entries may not be. Therefore, for example, if a non-finite verb is specified as α finite (i.e. under-specified for finiteness) rather than -finite then it could be inserted into a syntactic node with a +finite feature, likewise with the French subject clitic *il* could be specified as α gender etc. (Prévost and White, 2000: 127-8). They suggest that unlike in L1 acquisition where the under-specified form (α form) is gradually replaced with a more fully specified one (Ferdinand, 1996: see), in L2 acquisition the under-specified form persists and may never disappear (Prévost and White, 2000: 129).

This analysis of persistent under-specification or 'blockage' is very different to the other hypotheses that will be reviewed in this post-Initial State section (Representational Deficit Hypothesis (RDH), Feature (Re)assembly) as RDH argues that instead of an interface problem between the syntax and the lexicon, optionality is a result of a problem in the syntactic representation, and Feature (Re)assembly argues that the problem lies in re-mapping existing features more than in selecting new ones. However, before turning to review Representational Deficit Hypothesis and Feature (Re)assembly, I will first consider three empirical studies which are argued to support the MSIH view of optionality and Interlanguage grammar. It should be noted, however, that while the authors of MSIH do not explicitly deal with the Initial State debate, this account is not compatible with Organic Grammar/ Minimal Trees as under OG overt mor-

phology is used as a criterion for acquisition. Modulated Structure Building is based on a similar approach to OG, although Hawkins (2001a) does not specifically address what he uses as criteria for acquisition. Therefore it is assumed that proponents of MSB would not support a MSIH approach. Indeed Hawkins (2001a) has proposed the alternate theory - Representational Deficit Hypothesis (Hawkins and Chan, 1997).

3.3.1.1 Support for MSIH

Herschensohn (2001) studies the oral production data of two intermediate English speaking learners of French. The two learners were high school students who had both been in the same class for four years and had both enrolled on the same college course and had been assessed at the same level. One of the students, Chloe, then spent 6 months living in France in a "nearly total Francophone environment" and the other, Emma, continued her college course (Herschensohn, 2001: 283-4). The two learners were interviewed three times: once before Chloe's departure for France, once after 3 months of her stay in France and finally at the end of her stay (Herschensohn, 2001: 284). The interviews were structured to elicit present, past and future tense contexts. Herschensohn examined the errors in verbal inflection made by the two learners. She found that these fall into three categories (Herschensohn, 2001: 288):

1. wrong tense, e.g. present for past,
2. inflection error, e.g. singular for plural form, use of non-finite form in finite context
3. ellipsis, e.g. missing subject or verb.

Of these three error types, only the second one directly relates to the the MSIH and so I will concentrate on it here. There are only 37 errors of missing or faulty inflection in the corpus. 16/37 are non-finite forms, 14/37 are morphological errors and 7/37 are incorrect person-number agreement (Herschensohn,

2001: 289, 304-5, appendix 1). Herschensohn argues that the non-finite forms are still raised as they appear with subject clitics (often in conjunction with a strong pronoun) although there is only one example of a non-finite form with negation (see example below Herschensohn, 2001: 290, 11).

(3.66) *Je ne continuer pas.*
I neg continue-INF not
'I am not continuing.'

Instances of morphological errors (14/37) were often over-generalization errors with irregular verbs, e.g. *prener* instead of *prendre* (to take). None of these errors provide evidence that morphology and syntactic development are linked. Herschensohn (2001) argues instead that they support the theory that morphology is acquired independently of syntax (Herschensohn, 2001: 300).

Another study examining the MSIH was carried out by Sundquist (2005). He considered longitudinal oral data from a Turkish speaking adult learner of German collected as part of the European Science Foundation Project directed by Perdue (1984, 1993). Sundquist looked at the acquisition of finite and non-finite verbal morphology in main and embedded clauses. In Turkish, finite verbs have different verbal morphology in embedded clauses and main clauses as in embedded clauses finite verbs are also marked with the gerundive. This is not the case in German. Examples are shown below (Sundquist, 2005: 238-9, ex.1-3).

- Turkish examples

(3.67) *Ben bu makale+yi yann bitir +eceğ +im*
I this article+acc tomorrow finish +future +1sg
'I will finish this article tomorrow.'

(3.68) *Herkes [(biz+im) heykel+i kir+diğ+imiz] +i*
everybody we+gen statue+acc break+gerundive+1pl +acc
bil +iyor
know +3sg
'Everybody knows that we broke the statue'

- German examples

(3.69) *Fritz schreibt heute den Brief.*
Fritz writes+3sg today the letter
'Fritz is writing the letter today.'

(3.70) *...dass Fritz heute den Brief schreibt.*
...that Fritz today the letter writes+3sg
'...that Fritz is writing the letter today.'

Sundquist examined all verbal utterances with two or more non-verbal elements, for the use of finite verbal morphology. Following Prévost and White (2000) he analyzed each utterance for subject-verb agreement (plural forms identical to the infinitive were excluded). First, he considered finite verbs with overt finite verbal morphology. He found no instances of incorrect subject-verb agreement with the verb *sein* (to be) although for regular verbs and modals there were some errors. This is shown in table 3.12:

	Correct	Incorrect	Total
Regular verbs			
1sg *-e*	107	22	107/129 (82.9%)
2sg *-st*	11	2	11/13 (84.6%)
3sg *-t*	227	15	227/242 (93.8%)
Modals			
1sg (*kann, muss, will*)	29	1	29/30 (96.7%)
2sg (*kannst, musst, willst*)	7	0	7/7 (100%)
3sg (*kann, muss, will*)	45	2	45/47 (95.7%)

Table 3.12: Accuracy of finite verb endings (Sundquist, 2005: 241, Table 1)

The number of instances of incorrect finite morphology being supplied are low. Sundquist argues that this supports the Prévost and White (2000) idea that when finite morphology is supplied, it is accurate. Sundquist then looks at the use of finite and non-finite verbs in non-finite and finite contexts respectively. He defines a non-finite context as after another verb (e.g. modal) and after an auxiliary and he defines a finite context as in questions, with an embedded CP containing an overt complementizer or declarative main clause with negation. His results are shown in the table 3.13:

According to Sundquist, these results clearly show that finite verbs are not used in non-finite contexts but that non-finite verbs are found in finite contexts.

	+finite	-finite	total (non-target)
verbs in non-finite contexts	14	250	14/264 (5.3%)
verbs in finite contexts			
main clauses with negation	507	59	59/566 (10.4%)
embedded CP	56	9	9/65 (13.8%)
questions	19	0	0/19 (0%)
Total (finite contexts)	582	68	68/650 (10.5%)

Table 3.13: Overuse of finite and non-finite verb forms (adapted from Sundquist, 2005: 241-2, Tables 1&2)

The difference in this distribution was statistically significant. Sundquist suggests that these results support the MSIH (Sundquist, 2005: 241). However, given the different marking of finite verbs in main declarative and embedded clauses in Turkish, Sundquist looked at the use of finite forms in these contexts. He found that embedded clauses only appeared after the learner's 28th month in Germany (recordings started after 12 months). In the pre-embedded clause stage (12-26 months), non-finite verbs are present in 17% of finite contexts. Once embedded clauses appear, this number falls to 8.7%. Use of non-finite verbs in embedded finite contexts rises from 0% to 75% (9/12 occurrences) between the 28th and 34th month of data collection. This difference between main and embedded clause use of non-finite verbs is statistically significant. Sundquist argues that the learner is transferring his knowledge of L1 Turkish in distinguishing between main and embedded clauses and therefore is marking finiteness in embedded clauses by using a default form. These results, he claims, are again compatible with MSIH (Sundquist, 2005: 246).

One criticism leveled at proponents of MSIH is that the data on which their claims are based are small longitudinal (case) studies. Prévost (2008) attempts to remedy this by considering cross-sectional oral production data from 21 English speaking instructed learners of French. The data elicited by a one to one recorded interview which consisted of "spontaneous production, role-playing, story-telling, and so on" (Prévost, 2008: 360). The 21 learners

were divided into 4 groups based on a university placement test. This gave the following distribution:

	G1 (n=5)	G2 (n=5)	G3 (n=6)	G4 (n=5)
Level	Beginners	Intermediate 1	Intermediate 2	Intermediate 3
Age	29.6 (18-41)	27 (19-39)	31.8 (20-54)	28.2 (21-37)
Time from placement test to recording	1.7 months	1.4 months	1.7 months	2.8 months

Table 3.14: Learners and data collection details (Prévost, 2008: 360)

Prévost looked at the use of finite and non-finite verbal morphology in finite and non-finite contexts. He found broad confirmation for the MSIH in terms of the placement of non-finite lexical verbs in finite contexts although there is considerable variation within the group results. These can be seen in the last two columns of table 3.15. However, unlike in the longitudinal data reported in Prévost and White (2000) (see previous discussion in section 3.3.1, Prévost (2008) did find a significant number of examples of finite verbs in non-finite contexts. A non-finite context was defined as either a verb following a preposition, auxiliary, modal, other verb or negation. Finite verbs in non-finite contexts were mainly found with the beginner G1 group. This group used them on 48% of occasions. This percentage drops sharply for the other groups: Intermediate 1 (G2) only use finite verbs in non-finite contexts in 8.3% of occasions (Prévost, 2008: 367-8). Prévost does not give the percentages for the other two intermediate groups but based on 3.15, they both appear to be under 5%. However, within these group results, there is a lot of individual variation. The first two columns of table 3.15 show the total number and percentage of finite forms in non-finite contexts.

On the surface, this data appears problematic for the MSIH. However, Prévost argues that there are no example of these finite forms with "overt endings" such as *-ons* (1st person plural) and that they all appear with the schwa *e* as shown in examples 3.71-3.74 (Prévost, 2008: 369, ex. 10).[19]

[19]Translations were not provided in the text and have been added for clarity. Necessarily these are an approximation as the context is not always clear

	-Fin in +Fin context	Percent	+Fin in -Fin context	Percent
G1				
Ann	5/24	20.8	7/16	43.7
Morgan	6/40	15	4.5	50
George	3/27	11.1	10/17	58.5
Edward	2/85	2.3	3/3	100
Mark	2/62	3.2	1/8	12.5
G2				
Mike	33/57	57.9	2/26	7.7
Sophie	19/149	12.8	15/103	14.6
Jen	7/23	30.4		
Sue	5/110	4.5	2.58	3.4
Rod	2/144	1.4	3/138	2.2
G3				
Denise	26/99	26.3	4/73	5.5
Rose	10/86	11.7	1/122	0.8
Jill	20/178	11.2	36/224	16.1
Nicole	8/118	6.8	2/79	2.5
Kate	14/153	9.1	2/89	2.2
Rebecca	1/100	1	0/95	0
G4				
Dorothy	17/140	12.1	6/120	5
Sandra	9/83	10.8	2/78	2.6
John	6/149	4	4/126	3.2
Deborah	3/182	1.6	1/262	0.4
Martine	0/145	0	0/91	0

Table 3.15: Overuse of finite and non-finite verb forms, (Prévost, 2008: 372, Table 12)

(3.71) *J'ai difficile demande des questions. (Ann, G1)*
I-have-1S difficult ask-1/2/3S some questions
'I find it difficult to ask questions'

(3.72) *Il est prépare pour dormer. (George, G1)*
he is prepare-1/2/3S for sleep-INF
'He is ready for sleep'

(3.73) *Comment tu vas arrive à mon travail? (Jen, G2)*
how you go-1/2/3S arrive-1.2.3S to my work
'How will you come to my work?'

(3.74) ...*qui* *j'ai* *rencontre* *à* *Nouvelle-Écosse.* *(Jill, G3)*
...that I-have-1S meet-1/2/3S in Nova-Scotia
'...that I met in Nova Scotia'

He suggests that these instances of apparent finite forms may actually be bare (under-specified) forms and that the same arguments made for non-finite verbs being under-specified and thus appearing in finite positions in Prévost and White (2000), outlined above, hold for these finite forms in non-finite positions (Prévost, 2008: 370). He further argues that as occurrences of these forms are predominantly in the beginner G1 group, these finite forms in non-finite positions may be an L1 transfer effect from English. This could be due to the lack of overt morphology in English as 'bare forms' in English can either be finite or an infinitive (Prévost, 2008: 370-1, 373).

Prévost (2008) also compares the use of non-finite verb forms in finite contexts and finite verb forms in non-finite contexts. He finds statistically significant differences between overuse of finite and non-finite verbs for those learners who produce a high number of non-finite verbs in finite contexts. For those learners with a low number of non-finite verbs in finite contexts, the number of finite verbs in non-finite contexts was similarly low and no statistically significant result was found. Prévost argues that as he found systematic evidence of verb raising over negation, use of subject clitics and verbal agreement, that it is clear that even the earliest learners (G1) are using IP. The results thus support, he argues a "dichotomy between the categorial and featural contents of underlying grammars, and their (overt) morphological realization" (Prévost, 2008: 372).

3.3.1.2 Predictions of MSIH for English Learners of French

- Learners may produce non-finite forms in finite contexts, including in verb raising contexts, i.e. non-finite forms can appear before negation and adverbs.

- Learners may produce non-finite forms with subject clitic pronouns as well

as DPs.

- Learners may also produce finite forms in non-finite contexts but these will be limited to 'bare forms'.
- Optionality between finite and non-finite forms in finite contexts may persist to advanced stages.
- There will be clear evidence of a dissociation between syntax and morphology.

3.3.2 Representational Deficit Hypothesis

Hawkins and Chan (1997) tested an earlier idea by Smith and Tsimpli (1995) that once parameters or functional features are set in the L1 then they are fixed and subject to a critical period (during childhood). Therefore L2 learners cannot change these fixed parameter or functional feature settings (Hawkins and Chan, 1997: 188-9). Hawkins and Chan termed this view of language acquisition the 'Failed Functional Features Hypothesis' although it has since be re-named the Representational Deficit Hypothesis (Hawkins, 2001a, Hawkins et al., 2008). They tested 147 beginner, intermediate and advanced Cantonese Chinese speaking learners of L2 English on their knowledge of English restrictive relative clauses (henceforth RRCs).

Chinese and English differ in terms of wh-movement in RRCs, which Hawkins and Chan argue to be the result of a parametric difference between the two languages (Hawkins and Chan, 1997: 189). In English the wh-element (operator) moves to the Spec CP position leaving a trace behind as shown in example 3.75 (Hawkins and Chan, 1997: 190, ex. 1b). If the wh-element is null then a *that* or null element can be inserted in the C head as shown in 3.76 (Hawkins and Chan, 1997: 190):

(3.75) The girl$_i$ [$_{CP}$ who$_i$ [I like t_i]] is here.

(3.76) The girl$_i$ [Op$_i$ that [I like t_i]] is here.

However, in English certain types of operator movement are not possible, that is extraction from an embedded CP (wh-island) or from an embedded complex Noun Phrase. These are termed 'subjacency violations' as shown in examples 3.77 & 3.78 (Hawkins and Chan, 1997: 191):

(3.77) *The man who$_i$ Mary told me [when she will visit t_i] is here.

(3.78) *The boy who$_i$ Mary described [the way [that Bill attacked t_i]] is here.

Hawkins and Chan base their analysis of Cantonese Chinese on work done on Mandarin Chinese as RRCs work in the same way for both Mandarin and Cantonese. RRCs in Chinese are head-final and do not show overt wh-movement. For all types of RRCs a resumptive pronoun is required except when the subject position is relativized or optionally when an object position is. This is shown in examples 3.79-3.82 (taken from Hawkins and Chan, 1997: 193):

(3.79) *⊘/*ta gongzuo qingloa de neige nuhui*
⊘/*she work hard C the girl
'The girl who works hard'
(subject relative)

(3.80) *Wo xihuan ⊘/ta de neige nuhai*
I like ⊘/her C the girl
'The girl who I like
(object relative)

(3.81) *Wo jiao ta/*⊘ lai de neige nuhai*
I ask her/*⊘ come C the girl
'The girl who I asked to come'
(embedded subject relative)

(3.82) *Wo sung liwu gei ta/*⊘ de neige nuhai*
I gave present to her/*⊘ C the girl
'The girl who I gave a present to'
(indirect object relative)

Hawkins and Chan argue that in each of the sentence types above, there is also a null topic. This null topic binds with the null element, indicated by ⊘ in examples 3.79-3.82. They argue that this null element is in fact a null

pronoun, *pro*. This analysis also accounts for Chinese sentences, such as those given in examples 3.83 & 3.84 (Hawkins and Chan, 1997: 194, ex.10), which appear to violate subjacency. Hawkins and Chan argue "with *pro* in topicalized structures, nonviolation of subjacency [in these sentences] is expected, because subjacency is a constraint on movement, and no movement has taken place" (Hawkins and Chan, 1997: 194).

(3.83) *Zhege ren$_i$ wo xiang zhidao shui jian guo* $\varnothing_i$
this man I want know who meet ASP $\varnothing$
'*This man$_i$, I wonder who met $\varnothing_i$'
extraction of a topic from a wh-island

(3.84) *Zheben shu$_i$, [[$\varnothing_j$ du guo* $\varnothing_i$ *C de ren$_j$] bu duo]*
this book $\varnothing$ read ASP $\varnothing$ C man not many
'*This book$_i$, the people who read $\varnothing_i$ aren't many'
extraction of a topic from a complex noun phrase

Hawkins and Chan argue that these differences between Chinese and English are the result of a parametric difference in terms of wh-operator movement. They suggest that in English, C is specified for +/- predictive, +/- wh and +/-agr , whereas in Chinese only +/- predictive will be specified. The task for the Chinese learner of English is to establish the [wh] and [Agr] features, thus requiring wh-movement and the licensing of the "trace in the following subject position" (Hawkins and Chan, 1997: 197-8).

In order to test if Cantonese speaking learners of L2 English continue to have access to parametric settings not instantiated in the L1, Hawkins and Chan gave 3 groups of Cantonese learners of English a grammaticality judgement task. To help validate the task, it was also given to three groups of instructed French speaking learners of English and a group of native speaker controls. The French groups were included as French also has wh-movement in the same way as English. The L1 French learners were age and proficiency matched with the Cantonese speakers. Proficiency was determined by their scores on the Oxford placement test. Inclusion of the French speakers helps to address the question of whether the learners were able to make grammaticality judgements. If the

learners are able to make such judgements, then Hawkins and Chan predict that significant differences will emerge between the French and Cantonese speakers as the French speakers will be able to rely on their L1. However, they argue if the Cantonese and French learners perform similarly then it may be due to difficulty in making judgements *per se* (Hawkins and Chan, 1997: 201-202). Details of the subjects can be found in table 3.16:

		Oxford Placement Test			Mean number
Group	N	Range	Mean	Age	years of English
Chinese beginner	47	105-20	114.4	12-14	8
Chinese intermediate	46	135-50	141.7	15-17	11
Chinese advanced	54	170+	180.2	18-21	14.6
French beginner	33	105-20	114.1	12-14	4.4
French intermediate	40	135-50	142.2	15-16	5.9
French advanced	40	170+	180.3	17-19	7.6
English controls	32	170+	183.8	16-19	

Table 3.16: Subject details (Hawkins and Chan, 1997: 202, Table 1)

The grammaticality judgement task consisted of 101 tokens, 59 of which related to RRCs. The learners were given the task in written form but they also heard the sentences read aloud at the same time. This enabled the researchers to time the test and prevented learners from skipping ahead or going back to previous answers. The RRC tokens could be divided into four types as Hawkins and Chan (1997: 203-4) outline:

1. Those displaying the grammatical and ungrammatical use of operators and complementizers.

2. Those involving ungrammatical resumptive pronouns in simple relative clauses.

3. Those violating the Subjacency condition.

4. Sentences involving ungrammatical null subjects in embedded clauses.

The learners had to indicate whether they thought a sentence "definitely correct", "probably correct", "probably incorrect" or "definitely incorrect". These

answers were then converted into numerical scores from 3 to 0 respectively for grammatical sentences and 0 to 3 for ungrammatical sentences, i.e. correctly judging a sentence will result in a score of 3 (definitely) or 2 (probably). Students were also asked to correct any sentences they judged ungrammatical. One mark was given per correct correction.

Hawkins and Chan found that in terms of subjacency violations (extraction out of wh-islands and complex NPs), the results from the Chinese students declined as the students became more proficient and they were significantly worse that the French groups, as shown in the table below.

	wh-island		complex NP	
Groups	judgements %	corrections %	judgements %	corrections %
Chinese beginner	63	30	71	31
Chinese intermediate	54	21	61	18
Chinese advanced	41	14	38	1
French beginner	59	36	72	33
French intermediate	66	46	79	44
French advanced	85	76	90	51
Controls	98	95	85	60

Table 3.17: Results for subjacency violations (Hawkins and Chan, 1997: 211, Table 6)

Hawkins and Chan argue that the Chinese beginner group are correctly rejecting these subjacency violations, not because they know that extraction out of a wh-island is prohibited but because there is no resumptive pronoun (where there would be a trace if there was movement). Evidence for this is shown in the corrections that these beginner learners make as they add a pronoun as shown in example 3.86 (Hawkins and Chan, 1997: 210-2).

- Sentence in task: Subjacency violation

  (3.85) This is the man who Mary told me when she will visit.

- Learner correction

  (3.86) This is the man who Mary told me when she will visit *him*

Moreover, the evidence from the advanced learners suggest that as their proficiency increases, they cease to reject these kinds of sentences. It is not logical that beginners would adopt the English setting only to reject it later. A closer analysis of the individuals in the beginner group and their results on the resumptive pronoun items shows that 22 of the 47 beginners accepted (ungrammatical in English) resumptive pronouns as grammatical on over 73% of occasions. Only 11 students did not accept resumptive pronouns in over 50% of items. Of these 22 who accepted resumptive pronouns, 18 also corrected subjacency violations by adding a resumptive pronoun. Hawkins and Chan (1997: 212) argue that these beginner learners have clearly transferred the use of resumptive pronouns from their L1 and that they are rejecting the lack of pronoun rather than the subjacency violation. In terms of the advanced Chinese learners, they have clearly established that resumptive pronouns are not grammatical in English (judging 90% to be ungrammatical) and so they do not reject the subjacency violations due to a lack of pronoun. Instead, Hawkins and Chan argue that they allow subjacency violations because instead of requiring an overt resumptive pronoun, they posit instead a null resumptive pronoun *pro* as allowed in L1 Chinese. They conclude:

> ...with proficiency Chinese speakers do not acquire wh-operator movement but analyze the gap as a null resumptive pronoun *pro*. ...the subjects appear to perform in a native-like way [in rejecting overt resumptive pronouns] [b]ut such surface similarity to native speakers conceals the fact that they have quite different underlying syntactic representations. (Hawkins and Chan, 1997: 213)

Hawkins and Chan suggest that this evidence supports the idea that functional features not instantiated in the L1 are not available to the L2er who will not be able to acquire such features. It should be noted that this view of acquisition is not compatible with either Organic Grammar as it predicts L1 influence in the functional domain, or FT/FA as it argues that learners do not

have full access to UG, i.e. that they are limited to the L1 functional feature value. This view of language acquisition sits well with the Modulated Structure Building view as MSB allows for L1 influence in the functional domain but does not claim that learners have full access to UG options not instantiated in the L1.

3.3.2.1 Support for Representational Deficit Hypothesis

Several studies have argued in support of the Representational Deficit Hypothesis (henceforth RDH). This section will review three such studies, which consider data from a range of syntactic structure across several different languages. An early study supporting the RDH comes from Franceschina (2002), who conducted two studies examining the L2 Spanish of English, French, German, Greek, Italian and Portuguese L1 speakers in terms of structural case assignment, number and gender agreement. In order to test the RDH, Franceschina argues that the data should conform to the following criteria (Franceschina, 2002: 73):

Data must come from very advanced L2 speakers. This proposal [RDH] does not allow us to predict either the path or pace of L2 development, so data from beginner or intermediate learners would be largely irrelevant for our purposes.

1. They must provide evidence for the acquisition/ non-acquisition of functional features that are not present in all languages.

2. They must allow comparison between:

   a the L2 acquisition (in a group of speakers with the same L1), of functional feature X, such that X is present in the L1 and the L2, and the feature Y such that Y is present in the L2 but not in the L1, and/or

   b the L2 acquisition of functional feature X by L1 speakers of a language when X is instantiated and L1 speakers of a language where X is not instantiated.

Franceschina tested very advanced L2 Spanish speakers thus conforming to the first stipulation. The subjects were given an independent proficiency test and "only those who performed within the native speaker range of proficiency scores were retained" (Franceschina, 2002: 78). As she is looking at the acquisition of gender, which is not present in all languages and not present in the L1 of the English speakers learning Spanish, this is in line with stipulation 2. Stipulation 3a is addressed by looking at structural case, which is inherent to all languages, and number, which is instantiated in all the L1s considered. The acquisition of gender in L2 Spanish by learners with gender in their L1 (French, German, Greek, Italian and Portuguese) and without gender in their L1 (English) allows for the comparative requirements in 3a&b.

Franceschina hypothesizes that, as structural case is universal and number is present in all the L1s as well as L2 Spanish, the learners should have no problems in acquiring number. However, as gender is not instantiated in English, those learners with L1 English will perform less well that the L2ers with gender in their L1. To test this, Franceschina carried out two studies. The first was a gap-fill exercise in which subjects had to fill in a missing word. Of the 24 test items, 18 were target items and 6 were distractors. The test items targeted the use of accusative and dative pronouns for case, number and gender as shown in example 3.87. In the task administered, the word in brackets was not given. It is shown here to illustrate the target. (Franceschina, 2002: 79, ex.70).

(3.87) Los dos enchufes que compré estaban fallados. Sera posible cambiar (los) por unos nuevos?
'The two plugs I bought were faulty. Could I change (them) for new ones?'

Franceschina divided the 65 subjects into three groups: native Spanish controls, L1s with gender [+gen] and L1s without gender [-gen]. The performance of the three groups can be seen in table 3.18). The numbers are out of 18.

Group	n	*gender	*number	*case
L1 Spanish	25	2	5	0
L1 [+gen]	25	1	5	2
L1 [-gen]	15	11	5	0

Table 3.18: Gender, number and case mistakes by L1 group (adapted from Franceschina, 2002: 80, Table 3)

Statistical tests confirmed that the difference in gender marking was significantly different from that of case or number. Franceschina argues that the high levels of accuracy on case and number for all the groups (as reflected by the low numbers in table 3.18) supports the arguments in 1 and 2 above. The interesting finding for RDH is the effect of the presence or absence of gender in the L1 on the number of mistakes in the L2. The [-gen] performs significantly worse than the [+gen] group. If differences were an effect of learning an L2 then no difference would have been expected between the two L2 groups. Franceschina argues that learners who do not have gender in the L1 are will have difficulties acquiring it in the L2.

The second study conducted by Franceschina (2002) further examined the issue of gender. The learners were the same as before (with the addition of some extra participants, giving 73 in total). The task was a comprehension exercise/guessing game. The subjects heard and read a sentence. The sentence contained a pronoun and the subject had to indicate out of 3 possibilities, which one corresponded to the pronoun. There were 16 test items and 16 distractors. The group mean (out of 16) and standard deviation results are given in table 3.19:

Group	n	mean	standard deviation
L1 Spanish	29	14.69	2.16
L1 [+gen]	29	13.83	1.71
L1 [-gen]	15	12.20	2.39

Table 3.19: Gender mistakes by L1 group (Franceschina, 2002: 82, Table 5)

The results again show a statistically significant difference between the L1 Spanish group and the [-gen] group and the L1 Spanish group and the [+gen] group were not statistically different from each other. However, the difference between the [-gen] and [+gen] groups did not quite reach significance (p=0.063). This may be due to the smaller sample of [-gen] learners.

Franceschina argues that the results from both studies support the RDH view that if an uninterpretable feature (in this case gender) is not available in the L1 then L2 acquisition is "problematic" whereas if the L1 and L2 share an uninterpretable feature (e.g. structural case or number) then acquisition is not "problematic" (Franceschina, 2002: 83).

Tsimpli and Dimitrakopoulou (2007), following work by Tsimpli and Rousou (1991) and Tsimpli and Mastropavlou (2008), also examine if interpretable and uninterpretable features not instantiated in the L1 are still available in the L2. They argue that uninterpretable features are subject to a critical period but that L2 learners "compensate" in the way they use interpretable features (Tsimpli and Dimitrakopoulou, 2007: 218).[20] Tsimpli and Dimitrakopoulou consider the use of subject and object resumptive pronouns in wh-questions by Greek speaking L2 learners of English. As already discussed in the review of Hawkins and Chan (1997), English does not permit resumptive pronouns in the gap left by the wh trace. Greek optionally allows the use of resumptive pronouns except with object *what* questions (see examples below Tsimpli and Dimitrakopoulou, 2007: 220, ex. 2&3).

(3.88) *Pjon ipes oti (ton) prosevalan xoris legho?*
who said-2SG that him insulted-3PL without reason
'Who did you say that they insulted (*him) without a reason?'

(3.89) *Pjon fititi ipes oti (ton) aperipsan sti sinedefksi?*
which student said-2SG that him rejected-3PL at-the interview

[20]Tsimpli and Dimitrakopoulou (2007) argue for the 'Interpretability Hypothesis, which has some differences to Failed Functional Features that are not relevant to the current discussion. Therefore, following the example of Judy et al. (2008), they are considered here as advocates of the Representational Deficit Hypothesis.

'Which student did you say that they reject (*him) at the interview?'

(3.90) *Ti* *nomizis* *oti* *tha* *(*to)* *dhiavasum?*
what think-2SG that will it read-3PL
'What do you think that they will read (*it)?'

Tsimpli and Dimitrakopoulou (2007) also look at the variability in resumptive pronoun use by their subjects. This addresses the role of interpretable features which, they suggest, could be used in compensation for absent uninterpretable features (Tsimpli and Dimitrakopoulou, 2007: 218). English and Greek also differ in several other important ways. Greek is a null subject language and English is not. Greek also does not distinguish between animacy in questions (who/what in English) but it does require gender agreement (Tsimpli and Dimitrakopoulou, 2007: 221-3). Tsimpli and Dimitrakopoulou argue that the distinctions between English and Greek give rise to four combinations of interpretable and uninterpretable features depending on whether they are (un)interpretable at LF or PF, as shown below (taken from Tsimpli and Dimitrakopoulou, 2007: 223):

1. LF-interpretable/PF-uninterpretable features (e.g. animacy distinctions on Greek nouns and pronouns are not grammaticalized due to grammatical gender differences);

2. LF-interpretable/PF-interpretable features (e.g. animacy distinctions on English *wh-* and personal pronouns);

3. LF-uninterpretable/PF-interpretable (e.g. resumptive uses of subject-verb agreement and object clitics in Greek);

4. LF-uninterpretable/PF-uninterpretable (e.g. Case and subject-verb agreement in English)

Given that Tsimpli and Dimitrakopoulou suggest that uninterpretable features are not available in the L2, they predict that 3 and 4 will be "problematic" (Tsimpli and Dimitrakopoulou, 2007: 224). They tested two groups of Greek

learners of English, one intermediate and one advanced (n=48) and 26 English native controls using a grammaticality judgement task with 30 test items and 21 distractors. Tsimpli and Dimitrakopoulou found significant differences between the two groups in rejecting sentences with a resumptive pronoun. The intermediate group was less likely to reject these sentences than the advanced group. Differences between the intermediate group and the controls was statistically significant for both subject and object questions but for the advanced group there was no significant difference between them and the controls on object questions. Both groups were significantly more likely to reject object questions with a resumptive pronoun than subject questions with a resumptive pronoun (see table 3.20):

		Subject (-that)		Subject (+that)		Object	
	n	target	non-target	target	non-target	target	non-target
Inter.	21	63.9	36.1	59.6	40.4	59.5	40.5
Adv.	28	68.4	31.6	66.5	33.5	78.6	21.4
Ctrls	26	96.7	3.3	95.5	4.5	96.7	3.3

Table 3.20: Performance in ungrammatical subject and object questions (adapted from Tsimpli and Dimitrakopoulou, 2007: 229, Table 2, figures in percentages)

Tsimpli and Dimitrakopoulou then analyzed the results to see if there was an effect for animacy on pronouns (e.g. he vs it) or the type of wh-question, i.e. d(iscourse)-linked (e.g *which* questions) versus non-d-linked questions (e.g. *what* questions) (see the examples from Greek above which show a difference in the use of resumptive pronouns with d-linked and non-d-linked questions). They found that animate resumptive pronouns were rejected significantly more than inanimate ones (Tsimpli and Dimitrakopoulou, 2007: 230-1). They also found an effect for the use of inanimate pronouns with d-linked questions (Tsimpli and Dimitrakopoulou, 2007: 231-4).

Tsimpli and Dimitrakopoulou argue that these results suggest that Greek L2 learners of English are using the interpretable features of animacy and discourse-linking to constrain the use of resumptive pronouns (Tsimpli and Dimitrakopoulou, 2007: 234). They argue that the results from subject versus object

questions with a resumptive pronoun suggest L1 transfer to English in the uninterpretable domain. In relation to the interpretable feature of animacy, they argue that the results show a clear animacy effect with animate pronouns being rejected more than inanimate ones and thus they claim

> The target grammar, English, disallows the resumptive strategy in interrogatives overall. On the other hand, the L2 learner accepts resumptive inanimate pronouns. Thus, learner performance is not constrained by a target L2 representation but by L1 properties filtered through the interpretable feature of animacy. This is the sense in which an apparently target-like PF output may obscure non-target syntactic representations. (Tsimpli and Dimitrakopoulou, 2007: 236)

Tsimpli and Dimitrakopoulou (2007) conclude by arguing that the data presented here can only be accounted for under a system in which there is a representation deficit at the level of syntax rather than an interface/mapping problem between syntax and morphology (as per the Missing Surface Inflection Hypothesis, Prévost and White (2000)). They argue that this deficit is constrained to uninterpretable features but that interpretable ones not instantiated in the L1 can be acquired in the L2 and that these interpretable features can be used to compensate for the absence of the uninterpretable feature (Tsimpli and Dimitrakopoulou, 2007: 237-8).

Hawkins and Hattori (2006) tested the claims made by Tsimpli and Dimitrakopoulou (2007)[21] that there was a disparity between interpretable and uninterpretable features and that only the uninterpretable features selected in the L1 are available in the L2 whereas interpretable features are still available. They suggest two possible reasons why uninterpretable features may be subject to a critical period while interpretable ones are not. Firstly, in terms of acquisition, interpretable features are needed throughout life in order to acquire

[21] There was a delay in the publication of Tsimpli and Dimitrakopoulou (2007) as the paper was written several years earlier. Hawkins and Hattori (2006) had access to the unpublished manuscript.

new lexical items whereas uninterpretable features are not needed as they have no semantic content. This, they claim, is "functionally economical" (Hawkins and Hattori, 2006: 271-272). The second argument is based on the anatomy of the brain. They suggest that maintaining access to all the uninterpretable features which are no longer required in the adult grammar, is costly in terms of the amount of energy required. They suggest that there may be "some energy efficiency constraint that 'disconnects' components not directly required for cognitive functioning after a certain time lapse" (Hawkins and Hattori, 2006: 272). To examine continued access to uninterpretable functional features or lack thereof , they considered the acquisition of multiple wh-questions in Japanese learners of L2 English. Japanese is a head-final language with wh-words remaining in situ and not raising to the beginning of the sentence as in English. Compare the sentences in 3.91 - 3.93 (taken from Hawkins and Hattori, 2006: 274, ex. 1&2):

(3.91) What did Mary buy yesterday?

(3.92) *Did Mary buy what yesterday?

(3.93) *Mary-wa kinou nani-o kaimashi-ta ka?*
Mary-topic yesterday what-acc buy-past Q
'What did Mary buy yesterday'

While Japanese does not have wh-movement, a similar word order with the question word at the beginning of the sentence, is possible and is due to scrambling as shown in 3.94 & 3.95 (Hawkins and Hattori, 2006: 278, ex.13).

(3.94) *Nani-o John-wa kinou kaimashi-ta ka?*
what-acc John-topic yesterday buy-past Q
'What did John buy yesterday?'

(3.95) *Itsu John-wa hon-o kaimashi-ta ka?*
when John-topic book-acc buy-past Q
'When did John buy the book'

When more than one wh-word appears in a sentence then the second wh-word can scramble to the beginning of the sentence, as shown in 3.96 (Hawkins and Hattori, 2006: 279, ex.14b):

(3.96) *Nano-o* *dare-ga* *kaimashi-ta* *ka?*
what-acc who-nom buy-past Q
'What did who buy'

In English, cases of multiple wh-questions means that one of the wh-words will have to remain in situ, as shown in the examples below (Hawkins and Hattori, 2006: 277-8, ex. 9&10).

(3.97) Who bought what?

(3.98) Where did the professor say the students studied when?

(3.99) *? What did who buy?

(3.100) *? Where did the professor say when the students studied?

The ungrammatical sentences given above, which correspond to the grammatical Japanese sentence (example 3.96), are suggested to be ungrammatical because of subjacency violations (see previous discussion) or superiority violations. A superiority violation occurs when the closest head (in this case wh-word) is not selected for movement (see Radford (2004) for discussion of the Attract Closest Principle). Hawkins and Hattori illustrate the differences between subjacency and superiority violations by giving the examples in 3.101-3.103. < > indicate where the wh-word has moved from.

(3.101) When did Sophie's brother warn [Sophie would phone who <when>]?

(3.102) *Who did Sophie's brother warn [Sophie would phone <who> when]? (Superiority violation)

(3.103) *When did Sophie's brother warn [who Sophie would phone <who> <when>]? (Subjacency violation)

The issue is whether Japanese learners of English can acquire the constraint on wh-movement which disallows subjacency violations and superiority violations. Hawkins and Hattori administered a truth-value judgement task to 19 advanced Japanese learners of English and 11 English native speaker controls.[22] For the control group, they found statistically significant effects that neither superiority nor subjacency violations were accepted. In contrast, grammatical matrix or embedded scope questions (as in example 3.101 above) were accepted. However, for the L2ers they found no statistically significant effects for sentence type or violation. In other words the learners did not distinguish between grammatical embedded wh-questions (as in 3.101), superiority violations (as in 3.102) or subjacency violations (as in 3.103) (Hawkins and Hattori, 2006: 290-2). Individual participant analysis supported these group findings (Hawkins and Hattori, 2006: 293). Hawkins and Hattori argue that these results show that these Japanese learners of English have not established wh-movement but that they transfer 'scrambling' from the L1. They cite several authors who argue that scrambling in Japanese is movement to a Focus position (see, for example, Kawamura, 2004, Kobayashi, 2000). Hawkins and Hattori suggest that this is what the Japanese learners of English may be doing in this study. They argue the learners assign an interpretable Focus feature to all wh-words in English and this can then be valued by the uninterpretable Focus feature that has transferred from their L1 Japanese. As Japanese permits scrambling to the Focus position, this would account for why the L2ers in this study are not sensitive to the wh-movement violations as they are scrambling to a Focus position instead (Hawkins and Hattori, 2006: 297-8). In conclusion, they sound a cautionary note warning against assuming the underlying structure of L2 is the same as L1:

> ...the results of the present study suggest that caution is required

[22]Hawkins and Hattori (2006) have an extensive vetting procedure to ensure that their subjects were able to handle sentences of this type including a syntax test, requirement for post-puberty age of arrival, and the elimination of speakers with a response bias to choose all possible answers in 5 or more of the test items.

> in interpreting apparent target-like L2 performance as evidence for the acquisition of underlying properties of grammar assumed to be present in the grammars of native speakers. ...Subtle testing of a range of properties in the relevant domain might be required before one can say with confidence that feature [μ γ] is present in the grammar. (Hawkins and Hattori, 2006: 298)

3.3.2.2 Predictions of RDH for English Learners of French

- Learners may not reset the parameter to allow verb raising.
- Learners may use other UG constrained options available in the L1 to show the appearance of verb raising.
- The underlying syntactic representation of the L2 will be the L1.

3.3.3 Feature (Re)assembly

The developments in the field of syntax in terms of the role of features as outlined in the previous chapter, have lead some researchers to consider acquisition in terms of feature setting (see, for example, recent work by Hegarty (2005) and the papers in Liceras et al. (2008) and a recent special issue of Second Language Research (2009, 25;2)). Travis (2008) argues

> Features are at the heart of recent Chomskyan syntactic theory and within this theory at the heart of language variation. Therefore, any study of language acquisition done within this framework is now a study of the acquisition of features. (Travis, 2008: 23)

Lardiere (2003, 2008, 2009) has been at the forefront of arguing that the main task facing the L2 learner is to "reconfigure features from the the way these are represented in the first language" (Lardiere, 2009: 173). In this section the arguments for feature reassembly will be reviewed. I will then examine three studies suggesting that the Missing Surface Inflection and Representational Deficit Hypotheses may be inadequate to capture the subtleties of L2

learner variation. These studies posit that a feature reassembly approach may be more suitable.

Lardiere (2009) argues that under a feature analysis of syntax, the L2 acquisition "challenge" is to establish:

- With which functional categories are the selected features associated in the syntax, and how might this distribution differ from the feature-matrices of functional categories in the L1?
- In which lexical items of the L2 are the selected features expressed, clustered in combination with what other features?
- Are certain forms optional or obligatory, and what constitutes an obligatory context? More specifically, what are the particular factors that condition the realization of a certain form (such as inflection) and are these phonological, morphosyntactic, semantic or discourse-linked? (Lardiere, 2009: 175)

Lardiere argues that therefore the L2 acquisition task is not a case of "switch-setting" but one of re-mapping from the L1 to the L2 and is a "formidable learning task" (Lardiere, 2009: 175). As White (2009) points out, Lardiere's main interest lies in the area where the L1 and the L2 select similar features but package them in a different way as opposed to the (perhaps) more common SLA approach of finding something that exists in one language but not in another (e.g. gender) and considering if the L2 learner has access to features not instantiated in the L1, i.e "feature selection" (White, 2009: 345). However, as Lardiere shows, some alleged parametric differences are not as clear cut as they might appear. She illustrates this by discussing the "Nominal Mapping Parameter" proposed by Chierchia (1998) in which languages are supposed to differ according to whether they are +/- predicative and +/- argumental. Chinese type languages and English type languages differ in terms of the +/- predicative distinction (both being also +argumental) as Chinese type languages do not have the count/mass distinction that English does. All Chinese nouns are

considered "inherently plural mass nouns" (Lardiere, 2009: 192) as they are not specified for number or definiteness(Lardiere, 2009: 194, ex. 5).

(3.104) *wo qu zhao haizi*
I go find child
'I will go find the/some child/children.'

(3.105) *wo qu zhao haizi-men*
I go find child-PL
'I will go find the children.;

Lardiere claims that in order to fully understand the combination of features involved, it is necessary to consider the way in which they work in detail. For the purposes of this review, I will only present a brief outline of the syntax involved. Lardiere examines the plural marking of nouns in Mandarin Chinese (henceforth Chinese). She argues that Chinese does in fact have an optional plural suffix *-men* which can only be used in definite contexts and only with human referents. This is contrary to the claims of the Nominal Mapping Parameter, which argues that Chinese has no plural marking. In English, plurals can be definite or indefinite and are marked on all nouns (not just a human subset). The task facing the English learner of Chinese is how to restrict the plural marking to only +definite, +human contexts. Lardiere suggests that these learners would use plural marking in contexts inappropriate in L1 Chinese (Lardiere, 2009: 198). She reports on previous work on a Chinese speaking learner of L2 English, Patty (Lardiere, 2007, 2008: see). She argues that plural marking would be expected to be under-marked but that positive evidence would show that plural marking in English is not restricted as in Chinese. Patty's data, she argues, supports this hypothesis as plurals are under-marked (on approximately 50% of quantified contexts in her spoken data and approximately 84% of contexts in her written data) but she has "re-assembled the features ... from the way they are organized in Chinese" as she uses plurals with non-human and/or indefinite referents (Lardiere, 2009: 198-9).

According to the Nominal Mapping Parameter, Korean also does not mark plural. However, Lardiere argues that Korean also has an optional plural marker

-tul but that in certain contexts, e.g. with a demonstrative, plural marking is obligatory, as shown in the examples below (Lardiere, 2009: 200, ex. 15).

(3.106) *Chelswu-nun ku/i haksayng-ul po-ass-ta.*
Chelswu-Top that/this student-acc see-past-decl
'Chelswu sat that/this student (*those/ *these students).'

(3.107) *Chelswu-nun ku/i haksayng*-tul-*ul po-ass-ta.*
Chelswu-Top that/this student-*PL*-acc see-past-decl
'Chelswu saw those/these students.'

Lardiere follows Kim (2005) in arguing that for nouns that have already been referred to in the discourse as plural, then plural marking becomes obligatory (see Lardiere, 2009: 200-1 for discussion). Unlike Chinese, Korean plural marked nouns can also be interpreted as indefinite as well as definite, nor is plural marking restricted to +human. Korean does, however, have a restriction on plural marking with nouns. Plural quantified inanimate nouns (e.g. house) cannot have a numeric quantifier unless the quantifier is a (post-nominal) classifier with a [+human] noun. This is shown in the examples below (Lardiere, 2009: 204, ex. 27&28):

(3.108) *twu cip(*-tul)*
two house(*-PL)
'Two houses'

(3.109) *cip(*-tul) twu chay*
house(*-PL) two CL
'Two houses'

(3.110) *twu salam(*-tul)*
two human(*-PL)
'Two people'

(3.111) *salam(-tul) twu myeng*
human(*-PL) two CL
'Two people'

Lardiere argues that while traditionally the differences between Chinese and Korean on the one hand and English on the other have been considered in

terms of a parametric difference, this is not a helpful way to view the situation. Chinese and Korean do have plural marking on nouns but in a different way to English, i.e. they "partially overlap with and yet differ from each other in regard to plural-marking" (Lardiere, 2009: 210). The task for the L2 learner is to alter/reset the way plural features are assembled in the L1 to accommodate the data from the L2. This is not the same as the Representational Deficit Hypothesis as it does not argue that L2ers are limited to the L1 uninterpretable features but rather argues that the L2er will transfer the L1 settings and then re-structure from there. She claims that "any feature [interpretable or uninterpretable] that is detectable is, in principle, ultimately acquirable" (Lardiere, 2009: 214).[23] Lardiere has situated her hypothesis within the framework of Full Transfer/Full Access (Schwartz and Sprouse, 1996). She argues that the concept of the parameter, for example the Nominal Mapping parameter, is of little use as it "broadly predicts that we should not even encounter individual languages that include (generalized) classifiers and a count/mass distinction and plural-marking" and that instead of looking at acquisition in terms of parameter resetting, it is necessary to examine the acquisition of features and feature-assembly (Lardiere, 2009: 180). Liceras (2009) and Montrul and Yoon (2009) have argued that the concept of looking at feature assembly is worthy but it is not necessary to also dismiss the parameter model. Liceras argues that feature assembly and parameter re-setting can be complementary:

> ... feature assembly cannot exist without feature selection and ... the deductive value of parameters can be enhanced by research meant to discover how features combine. (Liceras, 2009: 287)

3.3.3.1 Support for Feature (re)assembly

Three recent studies have suggested that perhaps analyzing L2 acquisition data in terms of feature (re)assembly may provide a more elegant solution to the issue to post-Initial State variability (Ionin and Montrul, 2009, McCarthy, 2008,

[23] see Birdsong (2009) for a discussion of this claim.

White, 2008). Both McCarthy (2008) and White (2008) tested MSIH against the Representational Deficit Hypothesis and argue that neither fully accounted for the data they found whereas Ionin and Montrul (2009) (as described in Montrul and Yoon, 2009) examined the difference between feature selection and feature re-assembly. They considered Korean and Spanish learners of English and English learners of Spanish. Korean does not have definite determiners so the Korean learners of L2 English must select definiteness and map it on to a determiner. Both Spanish and English have definite determiners but in Spanish they can be used for a generic reading which is not possible in English. English expresses generic readings without determiners, i.e. bare plurals. Therefore the acquisition task for the Spanish learners of English is different from that for the Korean learners as the Spanish had to reassemble the features on determiners to exclude generic readings with definite deteminers. For English learners of Spanish, they must add the feature +/- generic to the features on determiners. Ionin and Montrul found that 60% of Korean learners of English acquired determiners and used definite determiners in specific but not in generic contexts. For the Spanish learners of English and the English learners of Spanish, it "proved easier for English speaking learners of Spanish to add [+Generic] to Spanish articles than for Spanish-speaking learners of English to fail to attribute [+Generic] to English articles" (Montrul and Yoon, 2009: 301). They suggest that as the near-native Spanish and English learners had "target-like performance" that feature reassembly is difficult but "not impossible".(Montrul and Yoon, 2009: 301).

McCarthy (2008) examined the production and comprehension of number and gender in English speakers learners of L2 Spanish. If MSIH is claimed to be a problem at the interface between morphology and syntax in production, then data from comprehension, which reduces the communicative pressure, should not show the same variability as in production. If similar variability is found, then it would suggest that the relevant syntax is not instantiated, supporting a Representation Deficit view (McCarthy, 2008: 461). In order to determine if the results for production and comprehension are qualitatively similar, it is

necessary to establish two types of variation error. For independent reasons McCarthy assumes that singular and masculine are under-specified forms for [number] and [gender] respectively in Spanish. Feature clash would result when a +feminine form was used in a masculine context or a plural in a singular context. Under a Representational Deficit view, variability would be expected to contain both feature clash and under-specified examples. See examples below (McCarthy, 2008: 468, ex. 15&16):

- Feature clash error

(3.112) *Tiene un periódico. *La está leyendo.*
has a newspaper-masc CL-sg-fem is reading
'S/he has a newspaper. S/he is reading it.'

(3.113) *Tiene una pelota. *Las está lanzando.*
has a ball-fem. CL-pl-fem is throwing
'S/he has a ball. S/he is throwing it.'

- Under-specification error

(3.114) *Tiene una manzana. *Lo está comiendo.*
has a apple-fem CL-sg-masc is eating
'S/he has an apple. S/he is eating it.'

(3.115) *Tiene unos cuadernos. *Lo está metiendo*
has some notebooks-pl- masc. CL-sg-masc is putting
en su mochila.
in her backpack
'She has some notebooks. She is putting them in her backpack.'

McCarthy tested 15 intermediate and 9 advanced English speaking L2 learners of Spanish and 10 native speakers of Spanish. Proficiency was independently established (see McCarthy, 2008: 469 for details). All learners did the comprehension task followed by the production task. In the reading comprehension task, following White et al. (2004), the learners had to indicate which picture (choice of 3) corresponded to the sentence containing a clitic. There were 16 experimental items out of a total 48 test sentences. The items targeted masculine and feminine objects as well as singular and plural ones. In the production

task, the learner was shown a picture and asked a question. The answer to this question then set up a second question, the response to which would target a clitic. There were 20 pictures in total.

The production task results showed significant differences between the intermediates and native speaker controls. The intermediate group were significantly more accurate in masculine clitic contexts than with feminine "suggesting the use of default morphology" (McCarthy, 2008: 474), as shown in table 3.21. There was no effect for number as the number of errors was low (n=7) across all learners. All these errors were singular for plural (suggesting under-specification rather than feature clash).

	Production			Comprehension		
	Interm	Adv	Control	Interm	Adv	Control
Gender (all)	82.3	92.0	100	79.7	97.3	99.0
Masculine	94.8	100	100	68.4	96.3	98.0
Feminine	69.9	84.0	100	90.9	98.4	100
Number (all)	96.8	98.9	100	97.5	96.5	100
Singular	100	100	100	98.3	95.8	100
Plural	93.7	97.9	100	96.7	97.2	100

Table 3.21: Mean percent accuracy for production and comprehension, (adapted from McCarthy, 2008: 474-7, Tables 1&3)

The comprehension results are similar to the production results as there are significant differences between the intermediate group and the controls, as shown in table 3.21. McCarthy suggests "this shows variability in comprehension for gender" thus arguing against the MSIH (McCarthy, 2008: 476). There were no significant differences for number as in the production task. However, this systematic pattern of under-specified morphology appearing in both specified and non-specified contexts is perhaps problematic for proponents of the Representational Deficit Hypothesis. The locus of the 'deficit' is not that the learners do not have a syntactic representation for gender but rather that it appears to be located in the feature representations in the morphological domain (McCarthy, 2008: 484).

White (2008) tested the Missing Surface Inflection Hypothesis and the Representational Deficit Hypothesis (RDH) against the Prosodic Transfer Hypothesis (Goad et al., 2003). The Prosodic Transfer Hypothesis (PTH) argues that the prosodic structure of the L1 "constrain interlanguage production of inflectional morphology" (White, 2008: 309). To test these three hypotheses, White considers their predictions for French speakers and Mandarin Chinese speakers learning English. She considers production and judgement data. The differences in the predictions of the three hypotheses are outlined in table 3.22.[24][25]

	RDH	MSIH	PTH
L1 effects	yes (morphosyntactic)	neutral	yes (phonological)
Task differences	No	??	Yes
Free vs bound morphology	same	same	different
Reg vs irreg tense	same	same	different
3rd sg vs noun pl	same/different depending on L1	-	same
± past, ±agr, ±plural	Mandarin defective French unimpaired	similar by both groups	both groups defective (prod.)
±definite	Mandarin defective French unimpaired	similar by both groups	Mandarin defective French unimpaired

Table 3.22: Predictions made by RDH, MSIH and PTH for L2 English (White, 2008: 311, Table 1)

White tested 23 Mandarin Chinese speaking and 19 French speaking learners of English as well as 19 native English speaking controls. Subjects were independently assessed for proficiency and no significant differences between the Mandarin and French groups were found. White administered a grammatical-

[24]In White's table RDH is labelled FFFH (Failed Functional Features Hypothesis) but in order to keep the terminology consistent with the discussion in this chapter, I have changed it.

[25]Please note that White is not clear if MSIH will predict task differences in her table but in the discussion she appears to agree with the view that it would predict differences.

ity judgement and an elicited production task. In the judgement task, learners were tested on use of articles (definite versus indefinite), subject-verb agreement and tense morphology. The items were presented in pairs and the learner had to indicate if either, neither or both of the sentences were possible. There were 37 experimental items and 12 distractors. Production data was elicited by describing a series of pictures.

The results of the judgement task show high levels of accuracy across all groups for both the verbal and nominal elements tested (learners averaged above 8/9 for the verbal items and above 4/5 for the nominal ones). However, there were some statistically significant differences between the groups. There were significant differences between the native speaker controls and the learners on all agreement measures but the only difference between the French and Mandarin speakers is that the French speakers were less accurate than the Mandarin speakers on the suppliance of subject-verb agreement. As regards definiteness, there were significant differences between the controls and both L2 groups with indefinites (the L2ers were less accurate) but with definite articles only the Mandarin group is statistically significantly different from the controls.

The production results were calculated on "the production of overt morphology in obligatory contexts" (White, 2008: 315)[26]. The results are summarized in table 3.23 (numbers are percentages):

	Cop/aux	past reg	past irreg	3sg	noun plural	def articles	indef articles
Controls	100	100	100	100	100	100	100
French	98	50	83.5	60	100	98.5	95.5
Mandarin	92.4	48	83.3	30.9	93.9	95.4	85.1

Table 3.23: Production results, French & Mandarin L2 English (White, 2008: 315, Table 2)

These results show suppliance of all past tense forms, both regular and irregular. Despite regular past tense marking being supplied on approximately

[26]White does not define how she determined an obligatory context, i.e. if the starting point is the subject and then looking to see if the verb agrees or if it is the verb and then looking to see if the subject agrees. This difference was highlighted in the discussion of MSIH above. Given White's previous work, I assume the latter

50% of occasions and irregular past tenses were marked in over 80% of occasions, there were no statistically significant differences either between the L2 groups or the forms. However, the results for subject-verb agreement (3sg) omission rates showed differences between the L2 groups (60% omission versus 30.9%) and this difference was statistically significant. Given the predictions of PTH, White compared the suppliance of 3rd person singular *-s* with plural noun marking (*+s*). Suppliance of plural marking was very high and there were no statistically significant differences between groups and the difference between suppliance of *-s* with nouns (plural) and verbs (agreement) was statistically significant. This result is problematic for PTH. There were no significant differences between groups on the use of definite articles but with indefinite articles the Mandarin speakers were statistically significantly worse than the French group.

White considers these results in terms of the different predictions made by the three hypotheses as presented in the table above. She finds no evidence in support of RDH as there are clear task effects, no differences between bound and free morphology and irregular past tense marking was supplied more than regular past tense marking. No L1 effects were found except with 3sg and indefinites but suppliance for both L1 French and L1 Mandarin were low, which would not be expected as French as the same features as English in this regard (White, 2008: 318). White claims the regular and irregular past tense results are problematic for MSIH but the high accuracy levels in inflection, when supplied, and absence of L1 transfer would support MSIH (White, 2008: 318-9). For the third theory, the main problem is the difference in 3sg and plural marking. However, its predictions for task differences, differences between bound versus free morphology and regular past versus irregular past, would appear to be supported.(White, 2008: 320). White concludes that none of the three hypotheses tested can full account for the data presented in her study. She suggests that Lardiere (2008)'s work might be "promising in this respect" but suggests that "a combination of theories is necessary in order to account for the performance

of L2 speakers in the morphological domain" (White, 2008: 321).

3.3.4 Predictions of Feature Reassembly for English learners of French

(3.116) Learners will transfer the feature settings from the L1.

(3.117) If the L1 and L2 both share a feature although it is used in different ways (e.g. English only permits verb raising with *have* and *be*) then learners will be able to reassemble the L1 features to use in the L2.

The three theories outlined in this section (Missing Surface Inflection Hypothesis, Representational Deficit Hypothesis and Feature Reassembly) all make different predictions for English learners of French. These predictions are summarized in table 3.24.

Prediction	MSIH	RDH	FR
Dissociation: syntax & morphology	✓	?	?
L1 transfer	?	✓	✓
Re-setting possible	✓	X	✓

Table 3.24: Summary of predictions for post-Initial State theories

In this chapter, I have outlined six important theories for language acquisition and summarized several studies in support of each. These theories each make testable predictions about the role and level of L1 transfer (either in the Initial State or throughout development) and in terms of potential parameter re-setting. These predictions will be empirically tested in the subsequent chapters. In chapter 4 I expand upon the predictions made this in chapter in light of the syntactic analysis of French and English given in chapter 2. I also detail the participants and tasks used in this study and how they will test between the six theories presented here. In chapter 6, I will evaluate the predictions made by each theory in terms of the results given in chapter 5. I will conclude by arguing which of theory or combination of theories is best supported by the data from the instructed English speaking learners of French studied here.

Chapter 4

Methodology

4.1 Introduction

In this chapter I will outline the methodology used in this study to empirically examine the L2 acquisition of French by English native speakers. I will first discuss the three research questions framing this study before turning to detailed predictions made by each of the theories reviewed in chapter 3. I will then introduce the participants involved in this study and the specific tasks used.

4.2 Research questions

Three overarching basic research questions frame this study. These are given in A - C. In this thesis I will only address these questions in relation to the acquisition of verb movement in French L2.

A. What is the initial state in L1 English learners of L2 French?

B. How do functional features develop in these learners?

C. What is the role of the L1 feature settings in this development?

Research question A is situated within a tradition of enquiry into the L2 initial state. In order to address this issue, I will test a group of beginner

learners. Details of this group is given in section 4.5.1. In chapter 3.2 I reviewed three current theories of the Initial State of L2 acquisition. After reviewing each theory I briefly summarized the predictions made by that theory for English learners of French (see sections 3.2.1.3, 3.2.2.3 and 3.2.3.1). These predictions are given below in sections 4.3.1 to 4.3.3 and more detailed hypotheses for the learners in terms of the verb raising structures tested (negation, adverbs and the use of subject and object clitics) are made.

Research question B addresses the development of functional features. As shown in chapter 2 verb movement is related to IP (which is a functional category). For verbs to move to IP then they must have the strong functional feature which triggers raising. Therefore by examining verb movement, I will be specifically investigating the acquisition of functional tense features within IP. In order to determine if/how functional features develop, I will test four post-Initial State groups of learners (see sections 4.5.2 to 4.5.5 for detail of these groups).

Research question C considers the role of the first language, in this case English, in the acquisition of a second language, in this case French. As discussed in chapter 3.2 different theories assume different levels of transfer from the L1. For example, FT/FA and MSB assume that everything transfers from the L1 (although for MSB this is not all at once) whereas OG only assumes partial transfer (lexical categories only). As English and French have different word orders in terms of verb placement, argued to be the result of different uninterpretable feature settings, then it is possible to examine if the learners transfer the setting from English. For example, if a learner produces Subject-Adverb-Verb (S-Adv-V) then this could be argued to be the result of transfer from English.

I will now consider the specific predictions made by each of the theories reviewed in chapter 3 for the acquisition of verb movement as evidenced by negation, adverbs, object and subject clitics. I will first consider the Initial State theories before turning to the post-Initial State theories. The Initial State

theories reviewed in chapter 3 were Full Transfer/Full Access (Schwartz and Sprouse, 1994, 1996), Organic Grammar (Vainikka and Young-Scholten, 1996, 2005) and Modulated Structure Building (Hawkins, 2001a).

4.3 Hypotheses and Predictions: Initial State theories

4.3.1 Full Transfer/Full Access

Full Transfer/Full Access argues that second language learners transfer their complete knowledge of the L1 into the L2 (full transfer) but that they still have access to UG (full access) and that re-structuring or 'parameter re-setting' is possible. In section 3.2.1.3, I listed the predictions repeated here as 4.1-4.3.

(4.1) Functional categories will be present from the outset.

(4.2) There will be evidence of L1 transfer in functional categories, i.e. L1 English learners of French will initially hypothesize a weak uninterpretable tense feature so adverbs and negation may appear pre-verbally.

(4.3) Re-setting to the target L2 feature is possible given sufficient input.

Prediction 4.1 argues that functional categories will be present from the outset. As was established in chapter 2, negation, adverbs, subject and object clitics all project in IP. Therefore, for beginner English speaking learners of French this would mean that utterances including sentential negation, adverbs, subject and object clitics would be available from the earliest verbal utterances[1]. However, under FT/FA the acquisition of syntax is independent of the acquisition of morphology, therefore non-finite verb forms can appear with subject pronouns/clitics, e.g. *elle regarder (INF) la télé* (she watch (INF) TV).

[1]NB: FT/FA, Organic Grammar and Modulated Structure Building, are theories of the Initial State once learners produce verbs.

Prediction 4.2 argues that there will be evidence of L1 transfer in functional categories. English learners of French will initially assume that French has the same feature settings as English.

i In terms of adverb placement learners will initially produce Subject-Adverb-Verb orders, e.g. *elle souvent regarde la télé* (she often watches TV).

ii For negation, at first learners will not raise lexical verbs over negation. Post-verbal negation may occur but only with *avoir (have)* and *être (be)* as this is possible in L1 English. We would also expect learners may attempt to transfer the present progressive tense (-ing) to French, which does not exist in French. This would predict that sentences 4.4 and 4.5 may appear.

(4.4) *elle (ne) pas regarde la télé.*
she (NEG) not watches the TV

(4.5) *elle n' est pas regarde la télé.*
she NEG is not watch-PRES the TV.
Target: 'she is not watching TV'

iii Object pronouns will first be used post-verbally as in English, e.g. *elle regarde la* (she watches it).

iv Non-DP subjects will be pronouns as in English rather than clitics as in French. This means the material (e.g. adverbs) can appear between the subject pronoun and the verb, e.g. *Je souvent regarde la télé* (I often watch TV).

Prediction 4.3 relates to the post-Initial State and argues English learners of French will reset the features of English to French with sufficient input. As FT/FA claims learners have full UG access, English learners of French will be constrained by the options available within UG. This does not mean that the learners are limited to the options available in English and French but may use alternate UG-constrained possibilities as part of their Interlanguage. For example, at an interim point, a learner may posit that negation is sentence final (as in German) when analyzing post-verbal negation. However, the resetting of

features is possible and predicted. We would therefore not expect to find 'wild' grammars, for example, we would not expect learners to raise lexical verbs with negation but not with adverbs.

4.3.2 Organic Grammar

Organic Grammar argues that learners acquire a second language by building the tree from the bottom up, layer by layer. In other words, learners will acquire VP before IP and then later CP. The predictions made by OG were given in chapter 3.2.2.3 and are repeated here as 4.6-4.8.

(4.6) Initial stage with no evidence of functional projections - i.e. a bare VP with no tense or agreement beyond default forms.

(4.7) Functional projections will emerge gradually.

(4.8) No L1 transfer of functional projections, i.e. once tense is acquired then verb raising should be obligatory (at least 60% on VYS criteria): negation and adverbs should follow the finite verb.

Prediction 4.6 argues for a lexical category only initial state. That is there will be no functional categories/projections present. Therefore, English learners of French will initially posit a bare-VP without negation or adverbs (both functional projections). There will be no tense or agreement morphology beyond default forms and subject pronouns/clitics will be rare as pronouns are again part of IP. It is possible that learners will use a form that looks like a pronoun/clitic but it will not behave like a pronoun/clitic as it is a stored lexical chunk.

Prediction 4.7 claims that functional projections will emerge gradually. In OG, once the learner starts projecting functional categories, he/she projects an underspecified functional projection or FP. Once this projection is established then adverbs and negation will appear. However, in OG if the head of the functional projection is empty then something must fill it therefore once English

learners of French establish FP then raising to it is obligatory. Neither pre-verbal adverbs nor pre-verbal negation is expected. Evidence for the projection of a functional category is based on the correct suppliance (over 60%) of overt morphology, for example subject-verb agreement will be correct in over 60% of occasions for IP to be established.

Prediction 4.8 states there is no L1 transfer in the functional projections. Once an English learner of French has established functional projections (FP, then IP) then there is no influence of English in these areas. OG predicts that word orders such as pre-verbal adverb placement (SAV) or pre-verbal negation (SNegV) should not occur.

4.3.3 Modulated Structure Building

MSB provides a combination of both the FT/FA and the OG approaches. Therefore the predictions it makes are also a combination of the predictions made by FT/FA and OG. These predictions were originally given in 3.2.3.1 and are repeated here as 4.9-4.12.

(4.9) Initial Stage with no evidence of functional projections - i.e. bare VP with no tense or agreement beyond default forms.

(4.10) Functional projections will emerge gradually

(4.11) When functional projections emerge there will be evidence of L1 transfer, e.g. SAdvVO instead of SVAdvO.

(4.12) Learners may re-set to L2 settings with sufficient input.

Predictions 4.9 and 4.10 correspond to predictions 4.6 and 4.7 that were made for Organic Grammar. So under MSB learners would also only initially posit a bare VP and we would not find evidence of tense or agreement. However, MSB differs from Organic Grammar in prediction 4.11 in comparison with prediction 4.8. Under MSB there will be transfer from English at each point of development, i.e. as each part of the tree is acquired. For English learners of

French acquiring verb movement this follows the same predictions as FT/FA in 4.2, repeated below:

i In terms of adverb placement learners will initially produce Subject-Adverb-Verb orders.

ii For negation, at first learners will not raise lexical verbs over negation. Post-verbal negation may occur but only with *avoir* (have) and *être* (be) as this will transfer from L1 English.

iii Object pronouns will first be used post-verbally as in English.

iv Non-DP subjects will be pronouns as in English rather than clitics as in French. This means the material (e.g. adverbs) can appear between the subject pronoun and the verb.

The three theories presented in this section all make different predictions or different combinations of predictions which will be empirically tested in the subsequent chapters. In section 4.6 I will outline the specific tasks used to test between these different predictions and in section 4.5.1 give details of the beginner group tested. I will now turn to the predictions made by the three theories reviewed in chapter 3 concerning post-Initial State development.

4.4 Hypotheses and predictions: Post-Initial State Theories

In this section I will consider in more detail the predictions made at the end of each review of the three post-Initial State theories discussed in chapter 3.3. These three theories were the Missing Surface Inflection Hypothesis (Prévost and White, 2000), Representational Deficit Hypothesis (Hawkins and Chan, 1997) and Feature Reassembly (Lardiere, 2009). In order to test between these theories and consider the development of interlanguage competence it will be

necessary to test several post-Initial State groups. Details of the groups involved are given in sections 4.5.2-4.5.5.

4.4.1 Missing Surface Inflection Hypothesis

The Missing Surface Inflection Hypothesis argues for a dissociation between syntax and morphology, i.e that morphology and syntax are acquired independently of each other. In section 3.3.1.2 I listed the predictions made for English learners of French and these are listed below as predictions 4.13 to 4.16.

(4.13) Learners may produce non-finite forms in finite contexts, including in verb raising contexts, i.e. non-finite forms can appear before negation and adverbs.

(4.14) Learners may produce non-finite forms with subject clitic pronouns as well as DPs.

(4.15) Optionality between finite and non-finite forms in finite contexts may persist to advanced stages.

(4.16) There will be clear evidence of a dissociation between syntax and morphology.

Prediction 4.13 states that non-finite forms will appear in finite contexts. This is because non-finite forms (e.g. infinitive or past participle) are default or under-specified forms. We would therefore expect to find non-finite forms in contexts where the verb has raised over negation or an adverb, for example, *'Marie ne regarder pas la télé'* (Marie doesn't watch(INF) TV). In such cases MSIH argues the verb has clearly moved out of the VP and into Tense (IP).

Following on from prediction 4.13, prediction 4.14 claims that as the non-finite verb can appear in IP, then the non-finite verb can co-occur with either a subject DP or a subject clitic.

Prediction 4.15 argues that this optionality can persist to advanced stages. So even advanced learners may produce non-finite forms (either an infinitive or

a past participle) in finite contexts on some occasions but not all.

Prediction 4.16 claims that there will be a clear dissociation between the acquisition of syntax and the acquisition of morphology. In terms of verb raising, learners may raise the verb in most or all contexts so the word order is correct but the subject-verb agreement morphology will not necessarily be correct.

4.4.2 Representational Deficit Hypothesis

Hawkins and Chan (1997) have argued for the Representational Deficit Hypothesis. Under this analysis, features not present in the L1 cannot be acquired in the L2. This gives the following predictions, repeated here from section 3.3.2.2.

(4.17) Learners may not reset the parameter to allow verb raising.

(4.18) Learners may use other UG constrained options available in the L1 to show the appearance of verb raising.

(4.19) The underlying syntactic representation of the L2 will be the L1.

Prediction 4.17 claims that English learners of French will not be able to reset the parameter to allow verb raising.[2]

Prediction 4.18 argues that learners will use other UG constrained options available in the L1 to create the surface word order pattern of verb raising but the underlying structure will be different. We would therefore not expect verb raising to cluster across negation, adverbs and object clitics.

4.4.3 Feature reassembly

The predictions made by Feature reassembly are based on the analysis of verb movement made by Lasnik (2007) as outlined in section 2.2.3. Under this proposal French and English both have verb raising: in French for all verbs and

[2]It should be noted that this analysis does not hold if Lasnik (2007) is followed but Hawkins and Chan (1997) based their account on a pre-Minimalist account of English and French syntax, which argued that English does not have verb raising. If Lasnik (2007) is adopted, then the RDH would have to be recast as Feature Reassembly as discussed in the next section.

in English only for auxiliaries and modals. This gives the following predictions, repeated here from section 3.3.4:

(4.20) Learners will transfer the feature settings from the L1.

(4.21) If the L1 and L2 both share a feature although it is used in different ways (e.g. English only permits verb raising with *have* and *be*) then learners will be able to reassemble the L1 features to use in the L2.

Prediction 4.20 claims that English learners of French will first transfer the verb raising features from the L1 into the L2. In other words they will only permit verb raising with auxiliaries and modals. Verb raising with auxiliaries and modals will occur with both adverbs and negation. Verb raising will not occur with lexical verbs.

Prediction 4.21 argues that learners will be able to reassemble the verb raising features of English to the French settings. Therefore we would expect to find that when learners raise the verb over negation with lexical verbs, they should also do so with adverbs and vice versa.

Feature reassembly does not make any predictions regarding features of the L2 that are not present in the L1. For example, French has syntactic clitics (subject and object clitics) as outlined in chapter 2.5 whereas English does not. Feature reassembly does not predict if English learners of French will be able to acquire syntactic clitics.

The hypotheses outlined in this section, both for the Initial State and post Initial State, will be empirically tested with five groups of English speaking L2 learners of French. In addition to the beginner group which will address the hypotheses concerning the Initial State, four non-beginner groups were chosen to encompass the spectrum of instruction, i.e. from the beginning of instruction in secondary school through to final year university undergraduate students. In the next section I will detail the participants in these groups before turning to the tasks administered.

4.5 Participants

In this study five groups of 15 learners will be tested in addition to 10 native speaker controls. The learners are divided into five groups based on the number of hours instruction they had received and correspond to beginner, low intermediate, upper intermediate, low advanced and upper advanced. A pre-test was also administered to ensure that the groups were distinct. See section 4.6.4 for further details. The learners are all native speakers of English. Any learner who was bilingual in another language was excluded. However, many of the students were also studying other languages.[3]

Group	Beginner	Low-int	High-int	Low-adv	High-adv	NS
N	15	15	15	15	15	10
Age	12-13	15-16	17-18	19-31	21-24	20-24
Instruction	78-	275-	521-	2nd	4th	-
(hours)	94.5	345	708	year uni	year uni	
French (years)	1	4	6	8	10	-

Table 4.1: Participants

4.5.1 Beginners

As shown in table 4.1 there are 15 learners in the beginner group. All 15 learners were taught at the same school (School A). They receive 90 minutes per week of instruction in French. Data was collected on two different occasions. The first 13 students in the group were tested at the end of the first term in their second year of French. At this point they had been timetabled for 78 hours of instruction. The other 2 students in this group (FS15 & FS16) were tested at the end of their second term and had been timetabled for 94.5 hours of instruction. Due to student or staff absence the 15 learners may have received slightly less than this. All students have also received an equal amount of instruction in German. Table 4.2 gives a breakdown of the learners in the beginner group including their gender, age at time of testing, length of time studying French

[3]One learner in the low-advanced group was a mature student. The other learners were all aged between 19-21.

and other languages they are learning, either in school (other school languages) or independently (other languages)

ID	Gender	Age at testing	French (years)	other school languages	other languages
FS01	female	13	1yr 3mths	German	3yr Czech 1yr Italian
FS02	female	12	1yr 3mths	German	
FS03	female	12	1yr 3mths	German	
FS04	male	12	1yr 3mths	German	
FS05	male	12	1yr 3mths	German	
FS06	female	13	1yr 3mths	German	
FS07	male	12	1yr 3mths	German	
FS08	male	12	1yr 3mths	German	
FS09	female	12	1yr 3mths	German	
FS10	female	12	1yr 3mths	German	
FS11	male	13	1yr 3mths	German	
FS12	male	13	1yr 3mths	German	
FS13	female	12	1yr 3mths	German	Spanish on hol
FS15	male	12	1yr 6mths	German	BSL 6 mths
FS16	female	13	1yr 6mths	German	

Table 4.2: Participants: beginner group

4.5.2 Low Intermediates

The 15 learners in this group are taken from two schools. In school A 10 learners were tested and 5 learners were tested from school B. All students were aged between 15-16 and in the first term of their fifth year of French. They were all studying for the G.C.S.E exam.[4] The students in school A had been timetabled for 90 minutes of French class per week for the first three years then 2 hours of French from their fourth year until the point of testing. This equals 275 hours of teaching. In School B all students received three 50 minute classes per week in the first year. In the subsequent two years students had two 50 minute classes per week. In the fourth and beginning of the fifth year students had three classes per week. This gives 345 hours of instruction. Again there

[4]In the UK system the GCSE exam is a state examination taken at age 16 and is a two year course. Students will have already taken 3 years of compulsory language classes before choosing to continue to GCSE level. These students had all chosen French and had studied it for 3 years before starting the GCSE course. The students were in the second year of the course.

are the same caveats about staff and student absence. Some of the students started learning French at primary school. The total number of years of French instruction is given in table 4.3. However, the teachers in both schools report that they assume no prior knowledge at the beginning of French at secondary school and so the students are taught from scratch. Table 4.3 gives details of each of the learners in the low-intermediate group.

ID	gender	age at testing	languages	school	hours instruction
FS01-11	female	16	German 3 yrs	A	275
FS02-11	female	15	German 5 yrs Turkish 1yr	A	275
FS03-11	female	15	German 3yrs	A	275
FS05-11	male	15	German 3yrs	A	275
FS06-11	male	15	German 3yrs	A	275
FS08-11	male	15	German 3yrs	A	275
FS09-11	male	15	German 3yrs	A	275
FS10-11	male	15	German 3yrs	A	275
FS11-11	female	15	German 3yrs	A	275
TS02	male	15	German 2 yrs	B	345
TS08	female	15	German 4 yrs	B	345
TS12	female	15	German 2 yrs	B	345
TS13	female	15	German 2 yrs Japanese 3 yrs	B	345
TS14	male	16	German 2 yrs	B	345
TS15	female	15	German 2 yrs	B	345

Table 4.3: Participants: low-intermediate group

4.5.3 High Intermediates

The 15 learners in this group come from 4 schools due to the low numbers of students taking French post-16. Three learners come from school A, 6 learners from school C, 1 learner from school D and 5 learners from school E. These students are all studying for their A-level exams and are in the second year of the A-level program.[5] The details of the numbers of timetabled teaching hours the students had in each school are listed below:

[5]The A-level course consists of two years from age 16-18 and is one of typically three or four subjects they study at this level. The GCSE exam is a pre-requisite for this course. Generally students must obtain a grade B or above at GCSE level in order to continue to A-level. GCSE grades are A*-G, with above a C considered a good pass.

In school A students were timetabled for 90 minutes of French per week for the first 3 years, 2 hours per week for the next 2 years (corresponds to the GCSE course aged 14-16) and then 5 hours per week during their sixth and the beginning of their seventh year. This totals 588 hours of class time.

In school C students were timetabled for 2 hours of French per week for the first three years, 3 hours per week in their fourth year, 2 hours per week in their fifth year and 5 hours per week in their sixth and the beginning of their seventh year. This totals 673 hours of class time. However, this school operates a roving form tutorial time which takes place at a different time each week instead of a lesson. This corresponds to a loss of approximately 17 hours of timetabled French lessons thus giving a revised total of 656 hours of class time.

In school D students only started learning French in their second year of secondary school, i.e. aged 12. For the first two years they received one hour per week, for the next two years, i.e. those corresponding to the GCSE exam years, they received 2.5 hours per week and for their fifth year and the first term of their sixth year they received 5 hours per week. This totals 521 hours.

In school E students were timetabled for 2 hours per week in the first four years of French, 3 hours per week in their fifth year (the final year of the GCSE course) and then 5 hours per week in their sixth and the beginning of their seventh year. As the students were tested slightly later in the year than those in the other schools this gives a total of 708 hours of instruction at the time of testing.

Table 4.4 gives a summary of the individual participants in the high-intermediate group.

4.5.4 Low Advanced

The 15 learners in this group were all enrolled in the second year of a French degree at a British university. They had all previously taken GCSE and A-level exams. One student, C08, was a mature student who had a 9 year gap between school and university but otherwise all students were aged between 19-20. None

ID	gender	age at testing	languages	school	hours instruction
FS01-13	female	17	German 6 yrs	A	588
FS02-13	female	18	German 7 yrs	A	588
FS03-13	female	18	German 6 yrs	A	588
SB01	female	18	Spanish 5yrs German 3 yrs	C	656
SB02	female	17	Spanish 5 yrs	C	656
SB03	female	18	Spanish 5 yrs	C	656
SB04	female	17	Spanish 5 yrs	C	656
SB05	female	18	Spanish 5 yrs	C	656
SB07	female	17	Spanish 5 yrs	C	656
SH02	female	17	Italian on own German 7 yrs	D	521
SL01	male	18	German 5yrs	E	708
SL02	female	17		E	708
SL03	female	17		E	708
SL04	female	17		E	708
SL05	male	17		E	708

Table 4.4: Participants: high-intermediate group

of the learners had lived in France prior to starting their degree. Table 4.5 gives the individual details of each of the low advanced group partipicants including other languages they speak.

4.5.5 High Advanced

The 15 learners in this group were all enrolled on the final year of a French degree at a British university. Details of the individual participants, including the length of their residency in France, is given in table 4.6. [6]

4.5.6 Native Speaker Controls

The ten native speakers tested as a control group were ERASMUS students from France on an exchange to a British university. They were each tested within 6 weeks of arriving in the UK. The 10 students were all studying English in

[6] One of the learners, D09, did not give details on how long she had been learning French but she had attended secondary school in the UK and taken French GCSE and A-level exams. According to her tutor she is not bilingual so I am happy to include her in this group.

ID	gender	age at testing	other languages
C01	male	19	Spanish 1yr, Latin 1yr, Mandarin 2yrs, German 5 yrs
C02	female	19	Spanish 8yrs, Mandarin 2yrs, Italian 1yr, Quechua 1yr
C03	male	20	German 7yrs, Spanish 18mths, Dutch 1yr
C04	male	20	Spanish 7yrs, Catalan 1yr
C05	female	19	German 9yrs, Dutch 1yr
C06	female	20	German 8 yrs, Spanish 2yrs
C07	female	20	Spanish 9yrs
C08	female	31	German 11yrs, Dutch 3yrs
C09	female	20	German 3 yrs, Irish 1yr
C10	female	20	Spanish 7yrs
C11	male	20	Spanish 5yrs
C12	female	20	
C13	male	20	Spanish 8yrs
C14	female	20	German 9yrs, Dutch 1yr, Spanish 1yr
C15	female	20	Spanish 1yr

Table 4.5: Participants: low-advanced group

ID	gender	age at testing	Time in France	other languages
D01	female	23	9mths	Spanish 10yrs, Catalan 1yr
D02	female	24	4mths	Spanish 3yrs, German 4yrs, Italian 1yr
D03	female	22	5mths	Spanish 3yrs, Catalan 1yr, German 7yrs
D04	female	21	8mths	Spanish 10yrs
D05	female	22	6mths	German 10yrs, Spanish 6yrs
D06	female	22	4mths	Spanish 6yrs
D07	female	22	2mths	Spanish 10yrs, Catalan 1yr
D08	female	23	10mths	Spanish 8yrs
D09	female	22	11mths	
D10	male	21	7mths	German 5yrs, Spanish 4yrs, Catalan 1yr
D11	female	22	5mths	Spanish 8 yrs, Italian 1yr
D12	male	22	1yr	German 5yrs
D13	male	22	6mths	Spanish 9yrs, Portuguese 3yrs
D14	female	21	5mths	Spanish 8yrs, Portuguese 2yrs, Italian 1yr
D15	female	22	5mths	Spanish 8yrs, German 3yrs, Portuguese 2yrs

Table 4.6: Participants: high-advanced group

combination with other subjects at universities in France and were in the UK for a three to six month stay studying at a UK university.

ID	gender	age
NS01	male	23
NS02	male	24
NS03	male	21
NS04	male	23
NS05	female	20
NS06	female	20
NS07	male	21
NS08	male	21
NS09	female	20
NS10	male	24

Table 4.7: Participants: Native Speaker controls

4.6 Tasks: rationale

The learners were given a battery of tasks. These included two elicited oral production tasks, a comprehension task, an acceptability judgement task in addition to a vocabulary measure and a background questionnaire. The four structures used to provide evidence of verb movement were negation, adverbs, object clitics and subject clitics. These four structures were tested across the tasks. Negation, adverbs and object clitics were tested three times: once in an oral production task, once in a comprehension task and once in a grammaticality judgement task. Subject clitics were only examined in the oral production task and grammaticality judgement task. I will return to full details of each of these tasks in section 4.7 but first, I will outline the rationale behind the choice of these types of task.

Using three types of task to examine if the learners are raising the verb allows us to consider the issue from three different angles covering production, comprehension and judgements. This triangulation of methods should lead to a greater insight into the nature of the learner's interlanguage competence (Mackey and Gass, 2005). For example, it will be possible to examine if learners produce and

accept the same type of utterance. If so, we can be confident that that structure is part of the learner's mental representation and not an artifact of the test. Ayoun (2000, 2005) and Birdsong (1989) have argued that relying on one task to examine a particular structure leads to significant task effects. For example, Ayoun (2005) considered data from two groups of French speakers learning English and a group of 20 English native speaker controls. The two learner groups comprised of 28 high school students and 32 university level students. The students were tested on negation, adverb and floating quantifier placement as well as pronoun inversion. They were given a written questionnaire which included three elicitation tasks: a controlled production task, a scalar grammaticality judgement task and a preference/grammaticality judgement. Ayoun showed that participants' accuracy levels differed significantly depending on the task. The participants performed best on the controlled production task with the grammaticality judgement task in second place and the lowest scores on the preference/judgement task. In order to best represent learners' internal grammatical competence it is therefore advisable to administer a variety of tests for the same structure. I will now examine what each of the tests will contribute to our knowledge of the Initial State and development over time.

4.6.1 Production Data

Myles (2005a) argues that the language produced by learners "remains the central source of evidence for ...build(ing) models of the underlying mental representations and developmental processes which shape and constrain second language (L2) productions" (Myles, 2005a: 374). In other words, evidence from a learner's performance, albeit constrained by processing or parsing difficulties, shows the most directly the state of a learner's interlanguage. There are two main types of production data: oral and written. I have chosen to concentrate on oral production data as elicited oral data allows for more spontaneous data than written as the learner has less opportunity to reflect on or monitor his/her production and resort to 'learnt linguistic knowledge' (Schwartz, 1993).

4.6.2 Comprehension task

Chomsky (1965) introduced the idea of a dissociation between performance and competence with performance underdetermining competence. If the oral production data discussed above is performance data then while it will give evidence for competence, it may underdetermine the competence of the learner. It is therefore important to consider other more indirect methods of assessing competence. I will use two different forms of indirect evidence to determine competence: a comprehension task and an acceptability judgement task.

The comprehension task will help determine if learners can distinguish between the presence and absence of certain features. For example, if the learner is not yet producing object clitics then it is difficult to determine if the learner has object clitics in their underlying grammar (competence) or not. The comprehension task can distinguish between these two options. If the learner chooses the object clitic answer (at above chance levels) then it is reasonable to conclude that the learner has an underlying representation for object clitics in his/her competence but that it is not yet available in his/her performance. Alternatively if the learner picks the non-object (or intransitive) answer (at above chance levels) then it is reasonable to conclude that the learner does not have an underlying representation for object clitics. The same can be said of negation and adverbs. Recent studies by Grüter (2006a) and Grüter and Conradie (2006) outlined in chapter 3.2.1.1, used comprehension task data to investigate the underlying competence of beginner learners who had not yet acquired sufficient vocabulary to carry out a production task.

4.6.3 Acceptability Judgement Task

Both production tasks and comprehension tasks have certain limitations. In oral production learners can make performance errors, for example a slip of the tongue and it can be difficult to disambiguate between these 'errors' and other non-target uses of the language. In the oral production tasks used in this

study, the learner must only give one sentence for each item. The task does not force the learner to give all the sentences that learner thinks are possible. For example, on one of the oral production tasks the learner must include an adverb in his/her sentence. As shown in chapter 2.3, adverbs can appear in more than one place. However, in the oral production task administered the learner only needs to produce one sentence. Comprehension tasks, at least the one used in this battery of tests, is limited to deciding between the presence or absence of a feature, for example the presence or absence of an object clitic. It does not necessarily inform about the word order within that utterance. These limitations can be circumvented with the addition of an acceptability judgement task. Acceptability judgement tasks ask the learner to make specific judgements about sentences. In this way the learner is forced to make decisions about sentences that he/she may not produce. Birdsong (1989) and Sorace (1996) have both argued that acceptability judgement tasks are very artificial and appeal to metalinguistic knowledge. However, an acceptability judgement task can disambiguate whether performance 'errors' form part of the underlying grammatical structure or if they are genuinely performance errors. If the learner accepts the same type of sentence as he/she produces then it is possible to conclude that the structure forms part of his/her mental grammar.

There are several different methods of collecting acceptability judgement data (see Sorace (1996) for a review). However, as my acceptability judgement task was to be carried out with beginners aged 12-13 as well as adult learners, I decided to use a very simple method of judgement task. Learners were required to read a short sentence and then decide if the sentence was very good/ good/ bad/ very bad or I don't know.

4.6.4 Pre-test

Chaudron (2003), Norris and Ortega (2000) and Tremblay (2009) argue for the importance of an independent measure of proficiency to determine group participants. As the learners will be tested on their syntax, a measure of non-syntactic

proficiency was required. The Meara and Milton (2003) Xlex vocabulary measure was chosen. According to Meara and Buxton (1987) scores on the English version of the Xlex vocabulary measure appeared to correlate with standardized general proficiency measures. Three pen and paper versions of Xlex produced by Annabelle David for the FLLOC project (www.flloc.soton.ac.uk) were used. Three versions of the test were developed in order for learners to be able to do the test as a group without being able to copy from a neighbour. In each version there were 120 items of vocabulary comprising of 100 real French words and 20 invented words made to look like French words. The task was presented as shown in appendix A. The learner was asked to tick all the words he/she knew. A score of 50 was awarded to every word ticked and 250 points were deducted for every invented word ticked. The learners were told that not all the words in the test were real words. This was to discriminate against learners ticking more words than they actually know. The maximum possible score was 5000 words.

4.7 Tasks: by structure

The types of task used to collect data have been outlined in the previous sections. I will now detail the specifics of each of the tasks administered for each of the structures tested, i.e. negation, adverbs, object and subject clitics. However, it should be noted that in oral production, the negation and adverb structures were tested together. This minimized the length of time required to administer the task and the negation items provided a distractor from the adverb items and vice versa. Both the comprehension task and the acceptability judgement tasks tested all the structures at the same time. The target sentences for the comprehension task and the judgement task were each assigned a number and then a random list was generated using random.org. The experimental tasks were all presented in the same order. The production tasks were carried out first with the negation/adverb task preceding the object clitic task. The learn-

ers then completed the comprehension task (except the two advanced groups which didn't do this task due to time constraints) followed by the acceptability judgement task. The beginning and low-intermediate groups both did the Xlex pre-test before their production tasks but the other groups did it after the production tasks. All the oral production tasks were recorded digitally and then transcribed using the CHILDES conventions. Copies of the transcripts will be made available via the FLLOC website (www.flloc.soton.ac.uk).[7]

4.7.1 Negation

Negation was tested in three different ways. Firstly as part of the oral production task, then in the comprehension task and finally in the acceptability judgement task.

4.7.1.1 Oral Production

Learners were presented with 30 cards one at a time. On each card there was a picture of a person/people doing an activity. For the negation section of this exercise the picture had a cross through it and the student was instructed to say that the person/people were not doing that thing. There were 10 such items and an additional 5 that also had an adverb on the card as well as the cross (further details on the adverb section of this task is presented below) and 5 distracters that just had the picture. The other 10 items formed the adverb experiment. This gave a total of 15 obligatory contexts for producing a negative sentence. An example of one of the cards is shown in figure 4.1. The target sentence is *"Elle ne joue pas au golf"* (she doesn't play golf). A full list of all the target sentences and accompanying pictures is given in appendix B.

The learners were given an example of what to say in English. The learners were also told that if they were unsure of any vocabulary then to ask the

[7]FLLOC is the French Learner Language Oral Corpora lead by Prof Florence Myles (Newcastle) and Prof Ros Mitchell (Southampton). It is an online resource containing several corpora which are all publicly available. Sound files and tagged transcripts are available for download. My doctoral work was attached to the project.

Figure 4.1: Oral production: example of item elicited negation

researcher. If a learner asked for a verb, then the verb was always given in the infinitive form. Learners were told this beforehand as well.

4.7.1.2 Comprehension

Negation, adverbs and object clitics were all tested at the same time in this exercise, with each structure being a distracter for another. There were 10 tokens of negation out of the 40 test items. The task was presented as a powerpoint presentation with soundfiles attached. The student was shown 2 pictures at the same time, one on each half of the screen and labelled A and B. The student then heard a native French speaker say a short sentence at a moderately slow pace, pause and then repeat the sentence. The student had to tick whether the sentence corresponded to picture A or picture B. An example was done at the start to ensure that the student understood the task. One example from the task is given below in figure 4.2 and the complete listing of all the pictures and sentences is given in appendix D. The sentence the students heard was "*Il ne porte pas son manteau*" (he doesn't wear his coat). Some students asked for vocabulary clarification, e.g. what does "manteau" mean? They were told it meant "coat". The items were randomized as explained in section 4.7 and were equally likely to have either A or B as a response, i.e. if a learner ticked A for all of the items, he/she would get 50% correct.

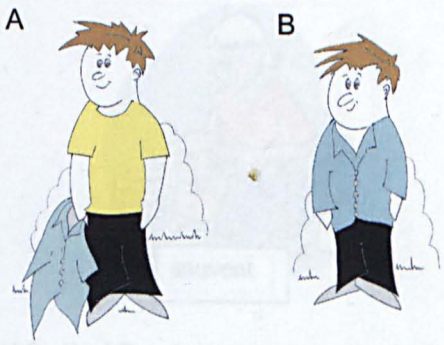


Figure 4.2: Comprehension: example of negation item

4.7.1.3 Acceptability judgement

In this task, as in the comprehension task outlined previously, all items were presented at one time in the acceptability judgement task, i.e. it was one task including tokens of negation, adverbs and object clitics. However, this task also contained items targeting the use of subject clitics and finite verbal morphology. The task comprised 64 items, of which 16 dealt with negation. These were divided between 8 grammatical and 8 ungrammatical sentences. Ungrammaticality was in two forms. One type of ungrammaticality had both *ne* and *pas* (see example 4.22) and the other type had a *ne* without *pas* (see example 4.23). A review of the previously collected data on the FLLOC project and published studies (see chapter 3) had shown that these were common errors made by students in their oral production.[8] A full table of all the sentences used in the task and a copy of the task administered to the learners is given in appendix E.

(4.22) **Il ne pas attend à la gare.*
he NEG not waits at the station
'He doesn't wait at the station'

(4.23) **Le garçon ne fait la cuisine.*
the boy NEG does the cooking
'The boy doesn't cook'

[8]Preverbal *pas* without *ne* was not found in my review of previously collected oral data so I omitted it from the judgement task (so that the task would not become too long).

Figure 4.3: Oral Production: example of adverb item

4.7.2 Adverbs

4.7.2.1 Oral Production

As mentioned in the negation section, negation and adverbs were tested together in the oral production tasks. The students were presented with 30 cards one after the other. On each card there is a picture of a person/people doing an activity. For the adverb section of this task, there was also a word on the card, e.g. souvent. The students were told that they must include this word in the sentence and were given an example. An example is shown 6in figure 4.3. The target French utterance for this example is "*elle lave souvent le chien*" (she washes often the dog). The students were told they could ask for any vocabulary they needed. There were 10 items with just an adverb on the card and 5 items with both an adverb and a cross (targeting negation as described in section 4.7.1). This gave 15 obligatory contexts for adverb placement.

In this task the following adverbs were used: *souvent* (often), *régulièrement* (regularly), *fréquemment* (frequently), *complètement* (completely), *encore* (again)[9], *toujours* (always), *rarement* (rarely) and *lentement* (slowly). These adverbs were chosen because:

- they are the most commonly used in the school textbooks reviewed,

[9]In retrospect, the inclusion of *encore* was perhaps a mistake given that it can either modify the verb meaning 'again' or the noun meaning 'another'.

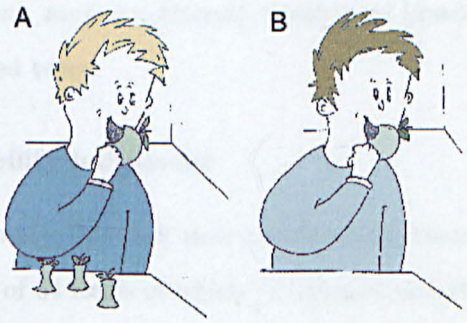


Figure 4.4: Comprehension: example of adverb item

- some are near-cognates and so present less of a challenge to the younger learners,
- they were felicitous in the context, and
- they all project between VP and TP according to the Cinque (1999) analysis presented in the syntax section (chapter 2).

Souvent was used five times, *régulièrement* twice, *encore* three times and the others once each. A full list of all the target sentences can be found in appendix B.

4.7.2.2 Comprehension

The adverb section of the comprehension task was presented in the same way as the negation section outlined above (section 4.7.1.2). The learners were presented with two pictures, labelled A and B and were asked to identify the picture that corresponded to the sentence they heard at the same time and tick A or B on their sheet. There were 10 items including adverbs in the comprehension task. One example of the stimulus is given in figure 4.4. The sentence the students heard was "il mange encore une pomme" (he eats another apple).

Five adverbs were used in this task, for the same reasons as outlined in the oral production section (section 4.7.2.1). These five adverbs were *souvent*

(often), *encore* (again), *toujours* (always), *rapidement* (quickly) and *lentement.* Each adverb was used twice.

4.7.2.3 Acceptability judgement

As mentioned previously, this task tested all four structures at the same time. The task comprised of 64 items of which 24 targeted adverbs. There are more adverb tokens than either negation or clitics as three types of ungrammatical sentence and two types of grammatical sentence were tested as opposed to two ungrammatical sentence types and one grammatical sentence type for the other structures. The sentences were divided between 12 grammatical and 12 ungrammatical sentences. Eight of the grammatical sentences were of the form *Subject-Verb-Adverb-Object* and four were *Subject-Verb-Object-Adverb.* In chapter 2.3 it was established that certain adverbs can appear at the end of the sentence (but others cannot) as shown in examples 4.24 and 4.25.

(4.24) *Elle lit souvent le livre.*
she reads often the book
'She often reads the book'

(4.25) *Elle lit le livre souvent.*
she reads the book often.

The ungrammatical sentences were equally divided between the English word order of *Subject-Adverb-Verb-Object*, the adverb in sentence initial position (*Adverb-Subject-Verb-Object*) and adverbs that are ungrammatical in sentence final position (*Subject-Verb-Object-Adverb*). See examples 4.26-4.28.

(4.26) **Le garçon souvent lit le livre.*
the boy often reads the book
'The boy often reads the book.'

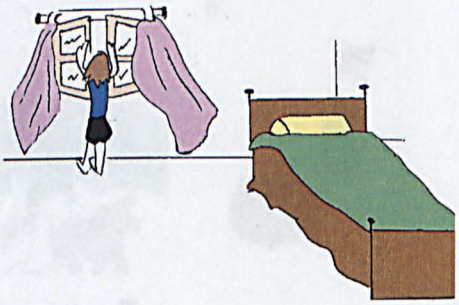
(4.27) **Il sort les poubelles encore.*
he puts-out the bins again
'He puts the bins out again.'

(4.28) **Lentement la femme rentre à la maison.*
slowly the woman returns to the house
'Slowly the woman goes home.'

4.7.3 Object clitics

4.7.3.1 Oral Production

The object clitic elicitation task was adapted from one designed by Theres Grüter (personal communication). Learners were told a short story about a day in the life of a girl based on a picture book. The learners were asked questions about the pictures. In the task originally used by Grüter (2005) there were 18 pictures with 20 questions eliciting 12 object clitics. In adapting the task, I added 5 pictures allowing for 24 questions, 15 of which targeted object clitics. This was to ensure parity of obligatory contexts between the different oral production tasks, i.e. 15 each for negation, adverbs and object clitics. As the original task was used with L1 children, the script was also simplified to allow for the differences in vocabulary between L1 children and L2ers. Cognates were used frequently to make the task more accessible for beginner learners. An example of one of the pictures used and the script accompanying it is given in figure 4.5.



- Marie va à la fenêtre.
  (Marie goes to the window)
- Qu'est-ce qu'elle fait avec la fenêtre?
  (What does she do with the window?)
- Target: elle l'ouvre. *(she opens it)*

Figure 4.5: Oral production: object clitics item

The full script with accompanying pictures can be found in appendix C. As with the previous oral production task, students were told they could ask for

any vocabulary items needed but verbs would be given in the infinitive.

4.7.3.2 Comprehension

The object clitics section of the comprehension task was presented in the same way as outlined for the negation and adverbs sections. Students were shown two pictures, labelled A and B, and heard a recording of a native speaker reading out a sentence slowly twice. The students had to tick A or B depending on which picture they thought matched the recording. There were 20 tokens relevant to object clitics. Ten items contained an object clitic (4 feminine, 4 masculine, 2 plural), five items contained a full DP object and five had no object. The verbs used were all optionally intransitive so the pictures were felicitous if the learner did not perceive an object. An example is given in figure 4.6. The sentence was *'Il le sort tous les soirs'* (He takes it (the dog) out every evening). If the learner does not chose the object clitic then the other picture (of a man going out) is felicitous.

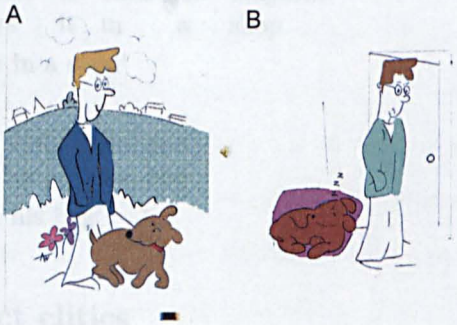


Figure 4.6: Comprehension: example of object clitic item

The verbs used were *attendre* (to wait (for)), *brûler* (to burn/burn down), *chasser* (to hunt/chase), *descendre* (to get/take down), *dessiner* (to draw), *monter* (to climb), *plonger* (to dive/plunge), *rentrer* (to return/take in), *sortir* (to go out/walk (e.g. the dog)), *souffler* (to breathe/blow out). A list of how these verbs were used and the accompanying pictures can be found in appendix D.

4.7.3.3 Acceptability judgement

There are 16 object clitic tokens, equally divided between 8 grammatical and 8 ungrammatical items, in this task. The grammatical items were divided between 4 with an object clitic as in example 4.29 and 4 with a DP object as in example 4.30. This was to determine if there is a difference in acceptance rates for DP objects versus object clitics when the other vocabulary items are the same. The ungrammatical items were of two types: firstly, an object clitic in the postverbal surface English position, as in example 4.31[10] and secondly, an omission of any object material with a transitive verb as in example 4.32.

(4.29) *Il le fait chaque jour.*
he it does every day
'He does it every day.'

(4.30) *Elle mange le pain avec de la confiture.*
she eats the bread with of the jam
'She is eating the bread with jam'

(4.31) **Elle achète le dans un magasin.*
she buys it in a shop
'She buys it in a shop'

(4.32) **Il met dans son sac.*
he puts in his bag
'*he puts in his bag'

4.7.4 Subject clitics

The use of subject clitics with finite verbal morphology has been argued to show evidence for the projection of IP (for example David et al., 2009, Myles, 2005b). However, under Missing Surface Inflection Hypothesis (see section 4.4.1 for predictions) the appearance of non-finite verbal morphology with subject clitics is also predicted. Therefore, I will consider the use of verbal morphology with subject clitics to provide further evidence of IP. However, subject clitics were

[10]It is possible that learners will interpret the object clitic in 4.31 as a determiner missing a noun and reject it accordingly. This could still be argued to support the idea that the learner requires an object in these sentences although we cannot be certain.

not tested in the comprehension task. This was due to the lack of phonological differences between singular and plural third person subject clitic forms in French, i.e. *il, elle* versus *ils, elles* and for many verbs (e.g. *regarde* versus *regardent*).

4.7.4.1 Oral Production

No specific task was administered to elicit subject clitics. However, the object clitic task outlined previously made the use of a subject clitic highly felicitous as the researcher always gave the name of the girl in the story (Marie) either in the question or the sentence preceding the question (see figure 4.5 for an example). Therefore the 15 contexts for the use of an object clitic will also be analysed in terms of the use of subject clitics and verbal morphology.

4.7.4.2 Acceptability judgement

The subject clitics section of the acceptability judgement task included the use of subject clitics and DP subjects with finite and non-finite verbal morphology. There were 8 items in total: 4 grammatical and 4 ungrammatical. The items were equally divided between masculine and feminine singular as well as subject clitic and DP subject. This was to ensure that learners were not accepting only type of subject clitic (e.g. masculine singular). The learners were also told that all the genders were correct so that learners did not reject a sentence because they thought a feminine noun was masculine. The ungrammatical items all involved an infinitive form as the non-finite form, see examples 4.33-4.34. A full list of all the sentences in the judgement task can be found in appendix E.

(4.33) **Il faire ses devoirs.*
he do(INF) his homework
*'He do(INF) his homework'

(4.34) **La fille jouer au tennis.*
the girl play(INF) to-the tennis
'*The girl play(INF) tennis'

4.8 Pilot test

The tasks presented in the previous section were pilot tested with a group of 6 learners aged 18-19 registered in an *ab initio* French class with less than three months instruction. This was to ensure that the explanations of the tasks were clear, that the tasks elicited the target responses, how long the tasks took to administer and that they were not too advanced for learners without much exposure to French. These learners had similar levels of vocabulary to the beginner group as measured by X-lex. The pilot test group were able to perform the tasks although they found it difficult. The pilot test did not include age matched controls.

Chapter 5

Results

5.1 Introduction

In this chapter I will report the results of each of the tasks administered to each of the participants as outlined previously in Chapter 4. The following chapter (6) analyzes and discusses the results presented here in light of the hypotheses outlined in sections 4.3-4.4. Here I will first present the results of the pre-test which was a measure of receptive vocabulary size. I will then present the results in terms of the structures tested across the groups, i.e. I will give the results of all the negation tasks, then all the adverb tasks, then the object clitics tasks before turning to the use of subject clitics. Giving the results first in this form will allow the following comparisons to be made:

- This facilitates testing between the theories which assume functional categories are present from the outset (Full Transfer/Full Access) and those which argue for gradual development from lexical to functional categories (Organic Grammar, Modulated Structure Building).
- Presenting the results in this form will also permit consideration of L1 transfer, if present in each of the structures and therefore tests between no L1 functional feature transfer models (Organic Grammar) and those

which argue for L1 functional feature transfer (Full Transfer/Full Access, Modulated Structure Building, Representational Deficit Hypothesis, Feature Reassembly).

- Considering the use of subject clitics and finite verbal morphology permits testing of the Missing Surface Inflection Hypothesis. If MSIH is correct, then this may argue against Organic Grammar and possibly Modulated Structure Building.

After presenting the results across the groups, I will then consider whether the results across the tasks can support a verb raising analysis or if learners are learning each structure independently, i.e. does verb raising cluster across the use of negation, adverbs and clitics. If there is evidence of clustering then this would argue against the Representational Deficit Hypothesis.

5.2 Pre-test results

As outlined in chapter 4.6.4, the pre-test was used to give a non-syntactic measure of general proficiency and is an estimate of receptive vocabulary size using X-lex (Meara and Milton, 2003). The highest possible score is 5000. Students received a mark of 50 for every vocabulary item ticked but were deducted 250 points for every false word ticked. Table 5.1 shows the mean, highest and lowest scores as well as the standard deviation for each of the groups.[1]

group	Median	Lowest	Highest
beginner	300	-600	1800
low-int	600	200	1650
high-int	2100	1750	3000
low-adv	2800	1050	3850
high-adv	3250	1850	4300
NS	4800	4550	4900

Table 5.1: Results: group pre-test

[1]low-int refers to the lower-intermediate group, high-int the higher intermediate group, low-adv the lower advanced group, high-adv the higher advanced group and NS refers to the Native Speaker controls.

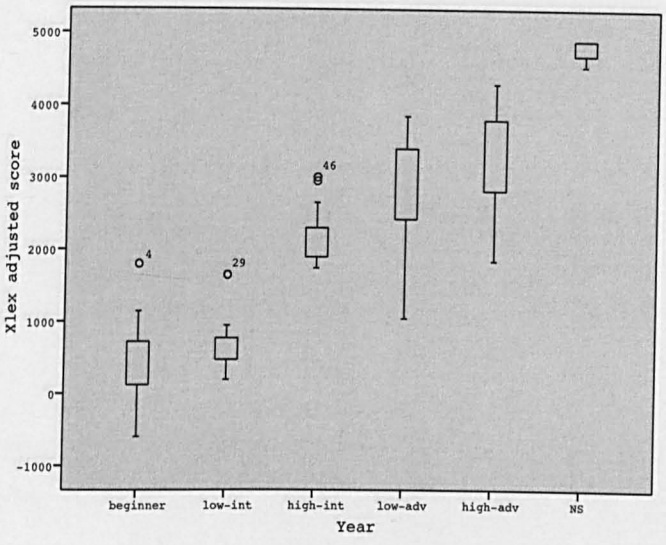


Figure 5.1: Pre-test group results

The median scores of each of the groups increase with proficiency, i.e. the median of the lower intermediate group is higher than the median of the beginner group and so on. However, the lowest and highest scores reported in table 5.1 clearly show that there is a large spread of results and overlap between groups. This can perhaps best be seen in a box-plot diagram (Figure 5.1).

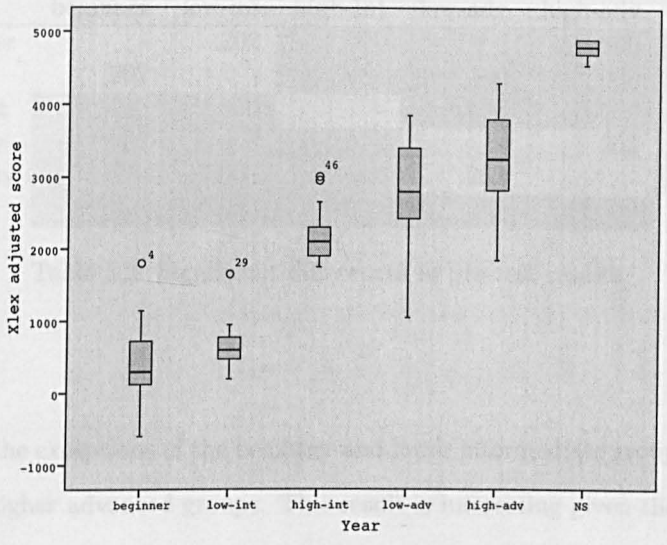
Shapiro Wilks tests for normal distribution showed that 4/6 groups were normally distributed but 2/6 were not. For this reason non-parametric tests have been conducted throughout.[2][3] Pairwise Mann Whitney U tests of the pre-test results reveal the statistical differences between the medians of the different groups as shown in Table 5.2. In this table the p-values are reported and all statistically significant results at the 0.05 level are reported with a * and are shaded in gray.[4]

These results show that all the groups are significantly different from each

[2]My thanks to Dr Simon Kometa, Newcastle University, for his advice on the statistical analysis.

[3]SPSS and R were used to calculate all the statistics presented in this chapter. The Mann Whitney U tests were corrected for false positives (Type I error) using the Holm-Bonferroni method (Holm, 1979).

[4]This method will be used for presenting all results of statistical significance.



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[4]This method will be used for presenting all results of statistical significance.

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	.202	*.000	*.000	*.000	*.000
low-int	.202	-	*.000	*.000	*.000	*.000
high-Int	*.000	*.000	-	*.030	*.002	*.000
low-adv	*.000	*.000	*.030	-	.202	*.000
high-adv	*.000	*.000	*.002	.202	-	*.000
NS	*.000	*.000	*.000	*.000	*.000	-

Table 5.2: Significant differences in pre-test results

other with the exceptions of the beginner and lower intermediate groups and the lower and higher advanced groups. This result is interesting given the different amounts of instruction each of the groups has received as reported in chapter 4. It could be argued that these groups should be collapsed . However, Mackey and Gass (2005: 110-1) claim that using classroom levels given the different amounts of instruction that they have received is a safe and valid measure of proficiency. Therefore I will keep the groups separate initially so as not to overlook any differences between them. I will return to this point in the discussion chapter (chapter 6). I will now turn to the experimental items relating to the acquisition of verb movement.

In the next section I will report the results of each of the three tasks (oral production, comprehension and the acceptability judgement task) for each of the structures under examination in relation to the acquisition of verb movement in French. These structures are sentences with negation, with adverbs and with object clitics and I will also examine the use of subject clitic pronouns with finite verbal morphology. I will first present the negation results before turning to adverbs then object clitics and finally considering subject clitics. As was reported in chapter 4, the oral production task was always completed before the comprehension task (except for the advanced groups who didn't complete the comprehension task) and the judgement task was the final task administered. This facilitates comparison between the groups on each of the tasks as there is no task effect differences due to the order of presentation.

5.3 Negation

The results for the sentences with negation come from the oral production task, the comprehension task and the grammaticality judgement task. Table 5.3 shows the number of obligatory contexts for negation in each of these tasks. In the oral production task 5 items targeting negation also required the learner to include an adverb in the sentence. In conjunction with 10 items with only negation this brings the total number of obligatory contexts for negation in the oral production task to 15.

	Oral Production	Comprehension	Judgement
Obligatory Context	15 (10 negation 5 with adverb)	10	16 (8 grammatical 8 ungrammatical)

Table 5.3: Obligatory negative contexts per task

5.3.1 Oral results

In this task for the items targeting negation, learners were shown a picture with a cross through it and had to give a sentence in French describing what the person was doing, for example: *elle ne joue pas au golf* (she doesn't play golf). The learner utterances on the 15 target items in the oral production task were coded according to the constituents of the sentence, i.e. subject, verb, negation, object. A selection of these codes are given in table 5.4 with examples for each. Only a selection of codes is given here as I also coded separately for several structures, which will be collapsed into 'other' as they do not inform about verb raising or L1 transfer. Examples of the structures subsumed into 'other' are given in table 5.4. These examples are hypothetical, but based on the target item *elle ne joue pas au golf* (she does not play golf). In this table *V* stands for lexical verb, *Neg* for negation, *X* for any other element (usually an object) and *aux* for auxiliary or copula. Utterances containing negation with auxiliaries or copula *be* have been counted separately from those with lexical verbs. This is to facilitate subsequent analysis of verb movement in terms of

lexical verbs (potentially parameter re-setting) or auxiliaries/copula (potentially L1 transfer).

Code	Description	Example
V-Neg	negation follows verb	elle (ne) joue pas au golf
Neg-V	negation precedes verb	elle (ne) pas joue au golf
aux-Neg	subject followed by negated auxiliary and object or verb	elle n'est pas golf elle n'est pas jouer au golf
other	other utterances, for example	elle ne joue(r) golf elle je n'aime pas jouer golf je n'aime pas elle joue golf elle ne joue golf pas
omit	omission	elle non bus

Table 5.4: Codes for negative sentences in oral production task

Table 5.5 gives the results for the oral task. There were 15 obligatory contexts to elicit negation, five of which also included an adverb. In the following table these 5 items have been included in the totals abstracting away from the position of the adverb. A Pearson's correlation between the use of postverbal negation in the 10 items containing only negation and the 5 items containing both negation and an adverb showed a significant correlation at the .01 level (r=.953).[5] This indicated that there is no effect for the presence of an adverb in this items. As non-parametric statistics have been used to calculate any significant differences between the groups, the median will be used rather than the mean in all the tables. I have also given the total number of utterances per group per utterance type (sum) and the range of utterances in each table. The sum is out of 225 for the 5 learner groups (15 learners * 15 obligatory contexts) and out of 150 for the native speaker control group (10 learners * 15 obligatory contexts). The range is between 0 and 15 obligatory contexts.

Table 5.5 shows an increase across the groups for the use of post-verbal negation (V-Neg) although the high advanced group (210/225) is slightly lower than the low-advanced group (214/225). The beginner group does not produce any utterances containing postverbal negation with a lexical verb. The low-

[5]The Pearson's correlation was chosen as the relationship between the variables is linear. A Spearman's correlation was also conducted with similar results.

		beginner	low-int	high-int	low-adv	high-adv	NS
V-Neg	*median*	0	1	14	15	15	15
	sum	0/225	44/225	179/225	214/225	210/225	150/150
	range	0	0-12	0-15	12-15	5-15	15-15
Neg-V	*median*	0	1	0	0	0	0
	sum	40/225	56/225	0/225	0/225	7/225	0/150
	range	0-9	0-13	0	0	0-7	0
auxNeg	*median*	2	0	0	0	0	0
	sum	69/225	25/225	0/225	0/225	2/225	0/150
	range	0-13	0-8	0	0	0-2	0
other	*median*	5	3	1	0	0	0
	sum	83/225	82/225	42/225	11/225	4/225	0/150
	range	0-15	0-15	0-15	0-3	0-1	0
omit	*median*	2	1	0	0	0	0
	sum	33/225	18/225	4/225	0/225	2/225	0/150
	range	0-6	0-3	0-3	0	0 -1	0

Table 5.5: Oral task results for negation across groups

intermediate group produces some (median=1). Pre-verbal negation was used by the low intermediate group, to a lesser extent by the beginners and by one learner in the high-advanced group. The beginners and low intermediates also used negation with an auxiliary unlike the other groups.

As shown in table 5.6, pairwise Mann Whitney U tests show that the beginners and low-intermediate groups are statistically significantly different from all the other groups on the use of post-verbal negation, i.e. these two groups use the order V-Neg (V-Neg) significantly less than the other groups. The high-intermediates were also significantly different from the native speakers as they used postverbal negation on fewer occasions (179/225 in comparison with 150/150). The three other groups, low and high advanced and the native speakers, were not significantly different from each other on this measure. These three groups all used negation on nearly all occasions (median=15). The beginners and low-intermediates are also significantly different from each other. In other words the low-intermediate group also used post-verbal negation on significantly more occasions than the beginner group, who do not use it at all.

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	*.002	*.000	*.000	*.000	*.000
low-int	*.002	-	*.001	*.000	*.000	*.000
high-Int	*.000	*.001	-	.296	.295	*.024
low-adv	*.000	*.000	.296	-	.850	.139
high-adv	*.000	*.000	.295	.850	-	.139
NS	*.000	*.000	*.024	.139	.139	-

Table 5.6: Significant differences in post-verbal negation results: oral task

In terms of the use of preverbal negation (table 5.7), that is Neg-V, the beginner and low-intermediate groups were statistically significantly different from the high intermediate and low advanced groups. That is, the beginners and low-intermediates used preverbal negation significantly more than the high-intermediates and low-advanced groups. However, levels of preverbal negation in these groups never reaches above 25% (56/225). The high-advanced group comparison with the beginners and low-intermediates did not reach significance as one learner produced 7 utterances containing preverbal negation. It is surprising that the native speaker comparison with the beginner and low-intermediate groups did not reach significance although it is likely due to the low levels of preverbal negation in all the groups and the smaller native speaker group size[6]. As the high-intermediates, low-advanced group and the native speakers did not produce any preverbal negation, these pairwise Mann Whitney U tests were not carried out.

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	1.000	*.036	*.036	.093	.093
low-int	1.000	-	*.018	*.018	.062	.062
high-Int	*.036	*.018	-	-	1.000	-
low-adv	*.036	*.018	-	-	1.000	-
high-adv	.093	.062	1.000	1.000	-	1.000
NS	.093	.062	-	-	1.000	-

Table 5.7: Significant differences in pre-verbal negation results

[6]As these significance tests were corrected for false positives using the conservative Holm-Bonferroni method (Holm, 1979), it is possible that it was too conservative a correction.

The results for the use of negation after an auxiliary (auxNeg) in table 5.8 showed that the beginner group was statistically significantly different from all the other groups except the low-intermediate group whereas none of the the other groups were significantly different from the others. In other words, the beginner groups used negation after an auxiliary significantly more than the other groups as the use of an auxiliary with negation was not attested for the high-intermediates, low advanced and native speaker groups. Negation after an auxiliary was infrequent with the low-intermediate (25/225) and high-advanced groups (2/225).

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	.401	*.007	*.007	*.018	*.036
low-int	.401	-	.066	.066	.179	.173
high-Int	*.007	.066	-	-	1.000	-
low-adv	*.007	.066	-	-	1.000	-
high-adv	*.018	.179	1.000	1.000	-	1.000
NS	*.036	.173	-	-	1.000	-

Table 5.8: Significant differences in use of an auxiliary/copula with negation results

In summary, the beginner group could be characterized as using predominantly negation after an auxiliary, some pre-verbal negation, a variety of idiosyncratic structures (e.g. negation at the end of the sentence) and significant levels of omission. Postverbal negation is not present in this group. The low-intermediates use pre-verbal negation most frequently but post-verbal negation and some other uses of negation (often the omission of *pas*) are also frequent.[7] The high-intermediates use post-verbal negation with occasional other structures (again omission of *pas*). The advanced groups use postverbal negation in over 210/225 utterances. The native speakers exclusively use post-verbal negation.

The results presented here have given an overview of the learners' performance in the negative contexts in the elicited oral production task. I will now present the results for the negative contexts in the comprehension task before

[7]The omission of *pas* was coded separately but as this does not inform on verb placement, it has been collapsed into the 'other' column.

turning to the judgement task.

5.3.2 Comprehension

In the comprehension task there were 40 items and 10 targeted the comprehension of negation. Learners were presented with two minimally different pictures and on hearing a sentence had to chose between picture A or picture B (see section 4.7.1.2 for details). As the target response was randomly assigned A or B, these answers have been re-coded into correct and incorrect. The median results (maximum is 10), sum total number of responses (out of 150 (15 learners*10 contexts) for the learner groups and out of 100 (10 learners*10 contexts) for the native speakers) and the range of answers (between 0-10) for the number of correct and incorrect responses for each of the groups who did the task (i.e. all groups except the advanced groups) are shown in table 5.9. There were no instances of omission.

		beginner	low-int	high-int	NS
correct	*median*	6	9	10	10
	sum	81/150	130/150	148/150	99/100
	range	3-8	4-10	9-10	9-10
incorrect	*median*	4	1	0	0
	sum	69	20	2	1
	range	2-7	0-6	0-1	0-1

Table 5.9: Comprehension results for negative items

Table 5.9 shows that all groups were correct in over 6/10 tokens and accuracy improves across the groups. The high-intermediate group performs at ceiling (10/10). Pairwise Mann Whitney U tests, given in table 5.10 reveal statistically significant differences between all the groups except the native speakers and high-intermediates, whose performance was similar and better than the other groups. The low-intermediate group also performed significantly better than the beginners in this task.

Group	beginner	low-int	high-Int	NS
beginner	-	*.000	*.000	*.000
low-int	*.000	-	*.008	*.013
high-Int	*.000	*.008	-	.844
NS	*.000	*.013	.844	-

Table 5.10: Significant differences in comprehension results for negative items

5.3.3 Judgement task

The grammaticality judgement task consisted of 64 items, 12 of which related to negation and verb placement. As described in section 4.7.1.3 these items were divided between grammatical (8 items) and ungrammatical (4 items) sentences.[8] The ungrammatical negation sentences involved *ne pas* appearing before the verb. The learners were asked to judge if the sentence was *very good*, *good*, *bad*, *very bad* or *I don't know*. In table 5.11, I have collapsed the *very good* and *good* into 'acceptable' (accept) and *very bad* and *bad* into 'unacceptable' (reject). *I don't know* has been classed as an omission (omit).

In table 5.11 I report the median, the sum total of answers and the range for each group divided out according to whether the target sentence was grammatical (out of 8) or ungrammatical (out of 4). The target response (accept with the grammatical items and reject with the ungrammatical items) has been shaded in gray.

Pairwise Mann Whitney U tests on the acceptance of grammatical negative sentences give the results in table 5.12. The beginners accepted the grammatical negative sentences significantly fewer times than all the other groups. The low-intermediates also accepted the grammatical negative sentences significantly fewer times than the other groups exception in comparison with the native speakers. All the other comparisons did not reach statistical significance as levels of acceptance were high (median=7/8-8/8).

[8]There were also 4 other ungrammatical sentences in which *pas* was omitted. As these sentences do not inform us about verb raising they have been omitted from this analysis. It is important to note, however, that the grammatical and ungrammatical items were equally weighted so if a learner ticked all sentences as grammatical, he/she would score 50%.

		grammatical /8			ungrammatical /4		
Group		accept	reject	omit	reject	accept	omit
	median	4	3	1	1	3	0
beginner	*sum*	55/120	50/120	15/120	20/60	37/60	3/60
	range	1-7	1-7	0-3	0-4	0-4	0-2
	median	6	2	0	3	1	0
low-int	*sum*	86/120	33/12-	1/120	32/60	28/60	0/60
	range	4-8	0-4	0-1	0-4	0-4	0
	median	8	0	0	4	0	0
high-int	*sum*	107/120	13/120	0/120	55/60	5/60	0/60
	range	1-8	0-7	0	2-4	0-2	0
	median	8	0	0	4	0	0
low-adv	*sum*	114/120	6/120	0/120	60/60	0/60	0/60
	range	7-8	0-1	0	4-4	0	0
	median	7	1	0	4	0	0
high-adv	*sum*	110/120	9/120	1/120	47/60	13/60	0/60
	range	6-8	0-2	0-1	0-4	0-4	0
	median	7	1	0	4	0	0
NS	*sum*	70/80	10/80	0/80	37/40	3/40	0/40
	range	1-8	0-7	0-3	0-4	0-4	0-2

Table 5.11: Grammaticality judgement results for negative sentences

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	*.021	*.001	*.000	*.000	*.001
low-int	*.021	-	*.031	*.004	*.021	.184
high-Int	*.001	*.031	-	.965	.965	.618
low-adv	*.000	*.004	.965	-	.954	.244
high-adv	*.000	*.021	.965	.954	-	.965
NS	*.001	.184	.618	.244	.965	-

Table 5.12: Significant differences in acceptance of grammatical negative sentences

The between group analysis on the pairwise Mann Whitney U tests showed the following statistically significant differences for the groups as shown in table 5.13 for the ungrammatical negative sentences with preverbal negation (Neg-V). The beginner group rejects significantly fewer sentences with preverbal negation (median=1) than the other groups except the low-intermediates. The low intermediates also reject the ungrammatical preverbal negation items on significantly fewer occasions (median=3) than the high-intermediates, low-advanced and na-

tive speaker groups. The high-advanced group also rejected these sentences on significantly fewer occasions than the low-advanced group but this is likely due to a higher number of outliers in the high-advanced group.

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	.481	*.000	*.000	*.014	*.003
low-int	.481	-	*.008	*.000	.204	*.020
high-Int	*.000	*.008	-	.204	.651	.972
low-adv	*.000	*.000	.204	-	*.028	.204
high-adv	*.014	.204	.651	*.028	-	.651
NS	*.003	*.020	.972	.204	.651	-

Table 5.13: Significant differences in rejection of ungrammatical *ne pas* sentences

In summary the beginners appear the accept more of the ungrammatical negation items which have *ne pas* preceding the verb as they accept a median of 4/8 (55/120) of the grammatical items and 3/4 (37/60) of the ungrammatical ones. However, the low-intermediates have reversed this and correctly accept a median of 6/8 (86/120) grammatical items and reject 3/4 (32/60) ungrammatical ones. However, it is worth noting that in the production task the low-intermediates produced more Neg-V than any other groups. In section 5.3.4 I will compare the results across the different tasks on negation. All the other groups perform at or near ceiling (i.e. median=7/8 - 8/8 acceptance of grammatical items and 4/4 rejections of the ungrammatical items).

5.3.4 Negation results across tasks

In this section I will compare the negation results reported above across the different tasks. As mentioned in section 5.3.3 which reported the results of the acceptability judgement task, two structures were tested: the grammatical post-verbal negation (V-Neg) and the ungrammatical pre-verbal negation (Neg-V). Both these structures were attested in the oral production data (see section 5.3.1). Figure 5.2 gives a comparison of the results for postverbal negation to see if learners are consistent in their production, comprehension and judgements. Please note that the advanced groups did not do the comprehension task. Figure

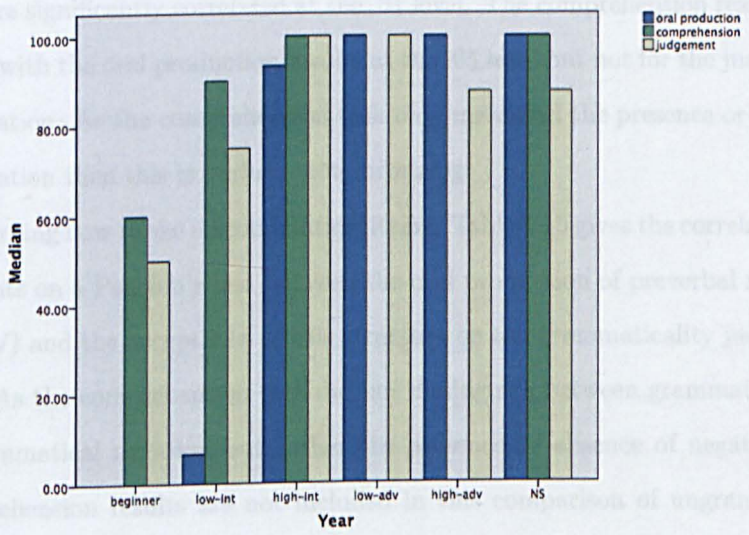

Figure 5.2: Postverbal negation (V-Neg) across tasks

5.2 clearly shows that learners performed best when determining if negation was present in the sentence (the comprehension task) and where there is a distinction between performance on the oral production task and the judgement task (i.e. for those groups which did not perform at ceiling) then learners performed better on the judgement task than the oral production task.

In order to determine if these results correlate a Pearson's correlation was conducted between the three tasks for both postverbal negation and preverbal negation. In table 5.14 the Pearson correlation co-efficient r is given as is an indication of the strength of the correlation. ** indicates the correlation is significant at the .01 level and * that it is significant at the .05 level.

	oral production	comprehension	judgement
oral production	-	-.227*	.735**
comprehension	-.227*	-	-.070
judgement	.735**	-.070	-

Table 5.14: Correlations between tasks on postverbal negation V-Neg

The correlations shown in table 5.14 indicate that the oral production of V-Neg and the acceptance of V-Neg sentences in the grammaticality judgement

task are significantly correlated at the .01 level. The comprehension results correlate with the oral production results at the .05 level but not for the judgement of negation. As the comprehension task only measured the presence or absence of negation then this is perhaps not surprising.

Turning now to the ungrammatical items. Table 5.15 gives the correlation coefficients on a Pearson's test between the oral production of preverbal negation (Neg-V) and the acceptance of this structure on the grammaticality judgement task. As the comprehension task did not distinguish between grammatical and ungrammatical negation but rather the presence or absence of negation, the comprehension results are not included in this comparison of ungrammatical negation across tasks. The results show a strong correlation between the production of Neg-V and the acceptance of it on the grammaticality judgement task, i.e. learners who produce this structure also accept it, suggesting it is part of their mental representation.

	oral production	judgement
oral production	-	.506**
judgement	.506**	-

Table 5.15: Correlations between tasks on preverbal negation Neg-V

5.4 Adverbs

The results for the use of adverbs again come from the oral production, comprehension and grammaticality judgement tasks. As already discussed in 5.3.1 in the oral production task some of the adverbs were presented with negation. There were 15 obligatory contexts for the use of an adverb in the oral production task and 5 of these also contained negation. A Pearson's correlation showed that the results for postverbal adverb placement showed a strong correlation at the .01 level (r=.777) between adverb placement on the 10 adverb only items and on the 5 items which also included negation so they will be reported together. There were 10 items with adverbs in the comprehension task and 24 items tar-

geting adverb placement on the grammaticality judgement task. These were also equally divided between grammatical and ungrammatical items. I will first report the oral production results before turning to the comprehension task and finally, in this section, the grammaticality judgement task.

5.4.1 Oral results

The utterances produced by the learners were all coded in the same way as detailed for the negation task. This gave a range of codes, examples of which are shown in table 5.16 using the target sentence *elle regarde souvent la télé* to illustrate.

Code	Description	Example
Adv-V	preverbal adverb	elle souvent regarde la télé
V-Adv-X	postverbal adverb with object	elle regarde souvent la télé
V-Adv	postverbal adverb without object	elle regarde souvent
V-X-Adv	sentence final adverb with object	elle regarde la télé souvent
other	adverb used but difficult to determine placement	elle n' est pas souvent regarde la télé
omit	no adverb used	elle regarde la télé

Table 5.16: Codes used in adverb oral production task

There are three potentially postverbal uses of adverb in the oral production data. One is a straightforward case of postverbal adverb placement followed by an object. This is coded V-Adv-X. Alternatively if the adverb appears after verb but also after the object, which is grammatical with certain adverbs, then it is unclear how the adverb relates to verb placement. These instances are coded V-X-Adv. There is an ambiguous situation in which the adverb appears after the verb but there is no object, coded V-Adv. In these cases it cannot be determined if these are V-Adv(X) or V-(X)-Adv. As only V-Adv-X is unambiguous then only these utterances will be considered as evidence of verb raising. V-Adv and V-X-Adv codes will be subsumed into 'other' in table 5.17.

One of the difficulties with coding the adverb data is the complication of the items which also targeted negation as some learners have used negation with an auxiliary and a lexical verb. For example, in the 'other' example in table 5.16 the

adverb follows the auxiliary but the lexical verb given after the adverb appears to be a finite form. For this reason all utterances appearing with auxiliary negation have been coded as 'other' unless the adverb precedes the auxiliary, in which case it was coded Adv-V (e.g. *elle souvent n'est pas regarde la télé* (she often does not watch TV)). The 'other' category also includes utterances without a subject and sentence initial adverbs (e.g. ASV).

Table 5.17 gives the median, sum total of utterances and range of utterances out of the 15 obligatory contexts. As per the oral production negation results, the sum total of utterances is calculated out of 225 for the learner groups and out of 150 for the native speakers. The maximum range is from 0-15.

		beginner	low-int	high-int	low-adv	high-adv	NS
Adv-V	*median*	7	1	0	0	0	0
	sum	82/225	50/225	2/225	6/225	0/225	0/150
	range	0-14	0-15	0-1	0-3	0	0
V-Adv-X	*median*	0	1	2	1	4	10.5
	sum	4/225	18/225	48/225	45/225	68/225	101/150
	range	0-2	0-7	0-11	0-9	1-11	6-13
other	*median*	5	11	13	13	11	4.5
	sum	99/225	143/225	174/225	172	155/225	48/150
	range	0-15	0-15	4-15	4-15	4-14	2-9
omit	*median*	2	1	0	0	0	0
	sum	40/225	14/225	1/225	2/225	2/225	1/150
	range	0-7	0-5	0-1	0-1	0-1	0-1

Table 5.17: Oral task results for adverbs across groups

Table 5.17 shows that the preverbal adverb order (Adv-V), which is the order in English, is used by both the beginner group and the low-intermediate group but not by any of the others. Adv-V is the most common structure produced by the beginner group. The median scores suggest that the beginners use the order Adv-V on 7/15 occasions but this drops in the low-intermediate group to only 1/15 occasions.

In terms of the post-verbal adverb placement with an adverb (V-Adv-X), this structure is attested in all of the group data although it is rare with the beginners (less than 2% or 4/225 utterances) and low-intermediates (8%). The other learner groups do not use this structure very often either, accounting for

between 20% to 30% (45/225 - 68/225) of the high-intermediate, low-advanced and high-advanced groups utterances. The native speakers use this structure on over 66% of utterances (101/150). Levels of omission were low in all the groups but the use of other structures (predominantly V-X-Adv and V-Adv) were high. The beginner and low-intermediate results suggest that the use of Adv-V decreases as the use of V-Adv increases.

Pairwise Mann Whitney U tests reveal that for preverbal adverb placement (Adv-V) the beginners were statistically significantly different from all the other groups except the low-intermediate group which was significantly different from all the others except the low advanced group and the beginner group. That is, the beginners and low-intermediates both put the adverb before the verb in significantly more utterances than the other groups, with the exception of the comparison between the low-intermediate and low-advanced groups. This probably due because the low-advanced group produced 6/225 Adv-V utterances and hence comparison with the low-intermediates did not reach statistical significance. The p-values are given in table 5.18 with the statistically significant differences marked with * and shaded in gray.

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	.787	*.006	*.014	*.001	*.009
low-int	.787	-	*.016	.066	*.003	*.016
high-Int	*.006	*.016	-	.787	.772	.787
low-adv	*.014	.066	.787	-	.478	.772
high-adv	*.001	*.003	.772	.478	-	-
NS	*.009	*.016	.787	.772	-	-

Table 5.18: Significant differences in preverbal adverb placement - oral production

For the structure V-Adv-X in which the adverb appears post-verbally and before an object (table 5.19), the native speakers are statistically significantly different from the other groups as they use this structure significantly more often. The beginners were not statistically significantly different from the low-intermediate group as neither group produced many of these utterances. The low-intermediates also produced significantly fewer V-Adv-X utterances than

the high-advanced group. No other comparisons were significantly different.

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	.186	*.026	*.049	*.000	*.000
low-int	.186	-	.513	.595	*.005	*.000
high-Int	*.026	.513	-	.816	.513	*.004
low-adv	*.049	.595	.816	-	.448	*.004
high-adv	*.000	*.005	.513	.448	-	*.005
NS	*.000	*.000	*.004	*.004	*.005	-

Table 5.19: Significant differences in postverbal adverb placement with object-oral production

In summary, therefore, the use of V-Adv-X is not frequent with any group. Only the native speaker group uses V-Adv-X on more than 50% of occasions (67.33% or 101/150). Only the beginner group can be characterized by using Adv-V more than any other structure although the low-intermediates also use Adv-V but to a lesser extent. The V-Adv-X structure appears to be avoided by the learners in favour of other (most frequently V-X-Adv) structures. It is possible that this is a task effect as the adverb appeared on the card and learners perhaps added it almost as an afterthought.[9]

5.4.2 Comprehension

In the comprehension task, 10 items targeted the presence of an adverb. Table 5.20 gives the median (out of 10 contexts), sum total of responses and range of correctly accepted and incorrectly rejected adverb items. Table 5.20 clearly shows high levels of correct responses in all groups, with the beginners scoring above 66% but accuracy scores increasing across groups.

Pairwise Mann Whitney U tests of the adverb results shows that the beginner and low-intermediate groups are not statistically signficantly different from eachother and neither are the high-intermediate and native speaker groups. However, all other comparisons are statistically significantly different, as shown

[9]Rogers (2008) examined the use of sentence final adverbs by comparing the oral production data with the acceptability judgement data for both grammatical and ungrammatical uses of adverbs at the end of the sentence. She found that learners who produce V-X-Adv also accept it on the judgement task and did not distinguish between the adverbs which can be used in this position grammatically and those which cannot.

		beginner	low-int	high-int	NS
correct	*median*	6	7	10	9
	sum	100/150	106/150	139/150	94/100
	range	3-10	4-10	6-10	9-10
incorrect	*median*	4	3	0	1
	sum	50/150	44/150	11/150	6/100
	range	0-7	0-6	0-4	0-1

Table 5.20: Comprehension results for adverbs items

in table 5.21.

Group	beginner	low-int	high-Int	NS
beginner	-	1.000	*.002	*.003
low-int	1.000	-	*.003	*.003
high-Int	*.002	*.003	-	1.000
NS	*.003	*.003	1.000	-

Table 5.21: Significant differences in comprehension of adverbs

5.4.3 Judgement task

In the grammaticality judgement task, there were 24 items relating to adverb placement equally divided between grammatical and ungrammatical items. Of the grammatical items eight targeted the order V-Adv-X[10]. There were also four items targeting the ungrammatical Adv-V order.[11] Table 5.22 gives the median (maximum possible 8 for the grammatical items and 4 for the ungrammatical items), sum total of responses and the range. For the learner groups the sum totals are out of 120 for the grammatical items and 60 for the ungrammatical ones. For the native speakers the sum of the grammatical items are out of 80 and out of 40 for the ungrammatical ones. The target response (accept or reject) has been shaded in gray.

Table 5.22 clearly shows high levels of acceptance of grammatical adverb placement by all groups (over 72/120 or 60%) and at chance levels or above of re-

[10]The other four targeted V-X-Adv, i.e. the adverb appearing after the object.
[11]The other ungrammatical items included 4 ASV and 4 ungrammatical V-X-Adv.

		grammatical /8			ungrammatical /4		
group		accept	reject	omit	reject	accept	omit
	median	5	2	0	2	2	0
beginner	*sum*	76/120	41/120	3/120	27/60	28/60	5/60
	range	1-8	0-7	0-1	0-4	0-4	0-2
	median	5	3	0	2	2	0
low-int	*sum*	72/120	48/120	0/120	29/60	31/60	0/60
	range	3-8	0-5	0	1-4	0-3	0
	median	7	1	0	3	1	0
high-int	*sum*	107/120	13/120	0/120	37/60	23/60	0/60
	range	5-8	0-3	0	0-4	0-4	0
	median	7	1	0	2	2	0
low-adv	*sum*	100/120	18/120	2/120	25/60	35/60	0/60
	range	5-8	0-3	0-1	0-4	0-4	0
	median	8	0	0	1	3	0
high-adv	*mean %*	112/120	8/120	0/120	24/60	36/60	0/60
	s.d.	6-8	0-2	0	0-4	0-4	0
	mean	8	0	0	4	0	0
NS	*mean %*	80/80	0/80	0/80	40/40	0/40	0/40
	s.d.	8-8	0	0	4-4	0	0

Table 5.22: Grammaticality judgement results for adverb sentences

jection of ungrammatical sentences by all groups. The beginners performed just under chance at 28/60 by incorrectly accepting ungrammatical adverb placement. Pairwise Mann Whitney U tests on the target responses for each group (i.e. accepting a grammatical sentence, rejecting an ungrammatical one) are shown in tables 5.23 & 5.24. In terms of correctly accepting grammatical sentences, the beginners and low-intermediates were not significantly different from each other as they both accepted fewer grammatical sentences than the other groups. The beginners were not significantly different from the low advanced group (100/120) but both the beginners and low-intermediates were significantly different from the other groups. The low advanced group was also statically significantly different from the native speakers (100/120 vs 80/80).

In terms of correctly rejecting ungrammatical Adv-V sentences (table 5.24) only the native speakers were statistically significantly different from the other groups. No other comparison reached significance. The native speakers correctly

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	1.000	*.011	.107	*.002	*.001
low-int	1.000	-	*.003	*.030	*.001	*.001
high-Int	*.011	*.003	-	1.000	1.000	.055
low-adv	.107	*.030	1.000	-	.358	*.031
high-adv	*.002	*.001	1.000	.358	-	.142
NS	*.001	*.001	.055	*.031	.142	-

Table 5.23: Significant differences in acceptance of grammatical V-Adv-X adverb items

rejected significantly more of the ungrammatical sentences than the other groups as they rejected all Adv-V items. All the learner groups incorrectly accepted the ungrammatical Adv-V order in over one third (23/60) of sentences.

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	1.000	1.000	1.000	1.000	*.001
low-int	1.000	-	1.000	1.000	1.000	*.001
high-Int	1.000	1.000	-	1.000	1.000	*.044
low-adv	1.000	1.000	1.000	-	1.000	*.001
high-adv	1.000	1.000	1.000	1.000	-	*.004
NS	*.001	*.001	*.044	*.001	*.004	-

Table 5.24: Significant differences in rejection of ungrammatical adverb items

The acceptance of Adv-V by all learners in the judgement task differs from the oral production task as not all learners produced pre-verbal (Adv-V) utterances. In the next section, I will compare the results across the tasks.

In summary, all the learner groups accept the ungrammatical Adv-V order between 23/60 and 36/60. This acceptance level does not diminish across the groups but rather remains stable. However, the learners accept the grammatical V-Adv-X order in over 50% of cases (median $\geq$ 5/8) and this acceptance level rises across the groups. This suggests that learners believe both orders are possible.

5.4.4 Adverb results across task

The adverb results come from 3 different tasks. Figure 5.3 gives the results for the production, comprehension and judgement of grammatical V-Adv-X sentences.

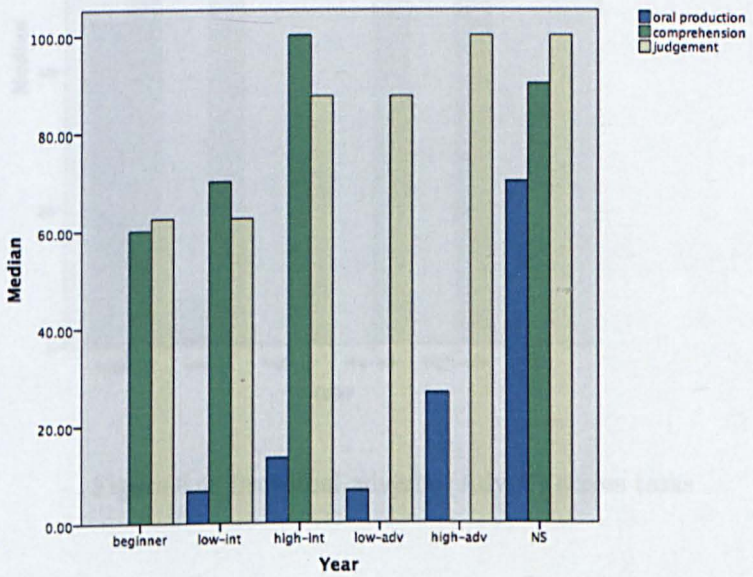

Figure 5.3: Postverbal adverbs (V-Adv-X) across tasks

A Pearson correlation between the production of V-Adv-X and the acceptance of V-Adv-X showed a strong correlation (r=.482), which was significant at the .01 level. However, there was no correlation between the production of Adv-V and the acceptance of Adv-V in the judgement task (r=.064) as is further shown by the graph in figure 5.4. This appears to be due to the high levels of Adv-V acceptance by all learners yet Adv-V is only frequently produced by the beginners and low-intermediates.

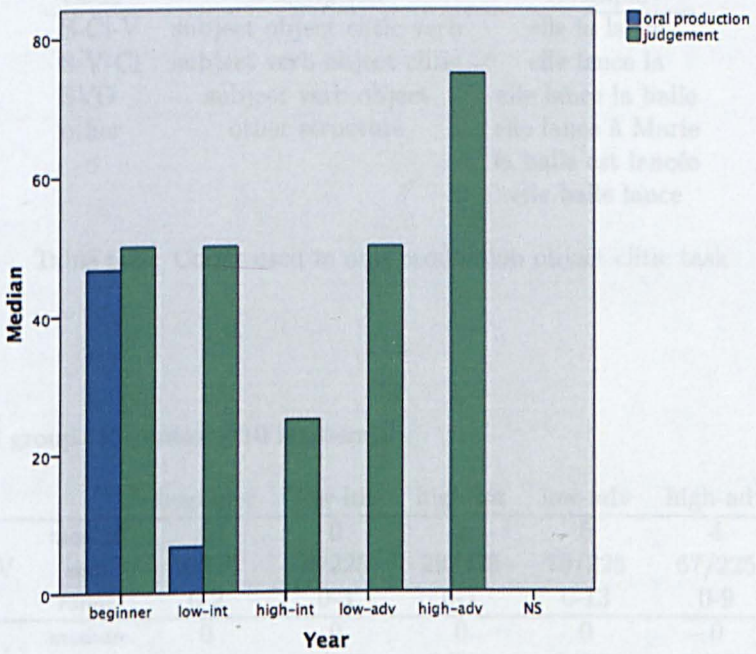

Figure 5.4: Preverbal adverbs (Adv-V) across tasks

5.5 Object Clitics

5.5.1 Oral results

In the object clitic task learners were read a story with an accompanying picture book about a day in the life of Marie. They were asked questions about the pictures which gave 15 obligatory contexts for the use of a clitic out of a total of 24 questions. The coding for the utterances can be found in table 5.25. Examples are based on the target item *elle la lance* (she throws it) in which *la* (it) is the object clitic pronoun for *la balle* (the ball). Items coded as 'other' include passives, utterances with no direct object, idiosyncratic word orders or omissions

The median of the 15 obligatory contexts, the sum total of utterances and the range are given in table 5.26. The sum total of utterances is out of 225 for the learner groups (15 contexts*15 learners) and 150 for the native speaker

Code	Description	Example
S-Cl-V	subject object clitic verb	elle la lance
S-V-Cl	subject verb object clitic	elle lance la
SVO	subject verb object	elle lance la balle
other	other structure	elle lance à Marie
		la balle est lancée
		elle balle lance

Table 5.25: Codes used in oral production object clitic task

control group (15 contexts*10 learners).

		beginner	low-int	high-int	low-adv	high-adv	NS
S-Cl-V	*median*	0	0	2	5	4	7.5
	sum	2/225	4/225	29/225	79/225	67/225	65/150
	range	0-2	0-3	0-7	0-13	0-9	1-11
S-V-Cl	*median*	0	0	0	0	0	0
	sum	1/225	0/225	3/225	0/225	0/225	0/150
	range	0-1	0	0-3	0	0	0
SVO	*median*	10	12	11	10	9	5
	sum	145/225	164/225	160/225	135/225	139/225	70/150
	range	0-15	3-15	5-14	2-15	5-14	3-15
other	*median*	4	3	2	1	1	1
	sum	77/225	57/225	33/225	11/225	19/225	15/150
	s.d.	0-14	0-12	1-4	0-2	0-2	0-3

Table 5.26: Oral task results for object clitics across groups

As table 5.26 shows the use of object clitics is not frequent in any group. The native speakers only use object clitics in 43% of the obligatory contexts (65/150). However, there is a clear progression in the use of object clitics (S-Cl-V) from the beginners (2/225) through to the advanced speakers (79/150 and 67/225 in the two advanced groups). The use of ungrammatical postverbal clitics, i.e. S-V-Cl, is extremely rare in all groups with only 4 instances. All the groups supplied utterances with an overt object rather than an object clitic (SVO). This was the most frequent structure used (60% or 135/225 for the learner groups and over 46% or 70/150 for the native speakers). Pairwise Mann Whitney U tests found no statistically significant differences (p=1.0) between any groups on the use of ungrammatical postverbal cltiics (S-V-Cl) as these were

hardly attested and on the grammatical use of SVO as all groups produced these so frequently. However, significant differences were found in the production of preverbal clitics (S-Cl-V). Table 5.27 gives the pairwise Mann Whitney U test results.

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	1.000	*.010	*.001	*.000	*.000
low-int	1.000	-	*.027	*.002	*.001	*.000
high-Int	*.010	*.027	-	.151	.124	*.018
low-adv	*.001	*.002	.151	-	1.000	1.000
high-adv	*.000	*.001	.124	1.000	-	.649
NS	*.000	*.000	*.018	1.000	.649	-

Table 5.27: Significant differences in production of S-Cl-V in object clitic task

Table 5.27 shows that the beginners and low intermediates were not statistically significantly different from each other as neither group produced many object clitics (2/225 and 4/225 respectively). However, they were significantly different from all the other groups. The high-intermediate group and native speakers were also significantly different from each other as the high-intermediate group produced significantly fewer object clitics than the native speakers. None of the other comparisons reached significance.

5.5.2 Comprehension

The comprehension of object clitics was tested in three ways as outlined in chapter 4.7.3.2, i.e. learners were tested to see if they comprehended a DP object (5 items), an object clitic (10 items) and intransitive verbs with no object (5 items). As previously reported for negation and adverbs, the learners had to tick the picture (A or B) corresponding to the sentence heard. These answers were recoded into *correct* and *incorrect*. There were no omissions. This means that there are three sets of results pertaining to object clitics to be reported in this section. Table 5.28 gives the median, sum total of responses and range of correct and incorrect answers supplied.

The results clearly show that the learners were less successful in the items

			beginner	low-int	high-int	NS
Clitic /10	correct	*median*	3	3	6	8.5
		sum	44/150	43/150	82/150	86/100
		range	1-7	1-5	1-9	7-10
	incorrect	*median*	7	7	4	1.5
		sum	106/150	107/150	68/150	14/100
		range	3-9	5-9	1-9	7-10
DP /5	correct	*median*	4	4	4	5
		sum	60/75	61/75	66/75	48/50
		range	2-5	2-5	3-5	4-5
	incorrect	*median*	1	1	0	0
		sum	15/75	14/75	9/75	2/50
		range	0-3	0-3	0-2	0-1
Intrans /5	correct	*median*	3	4	4	4
		sum	49/75	51/75	62/75	44/50
		range	2-5	1-5	1-5	4-5
	incorrect	*median*	2	1	1	1
		sum	26/75	24/75	13/75	6/50
		range	0-3	0-4	0-4	0-1

Table 5.28: Comprehension results for object clitic items

with an object clitic than in the items with a DP object or an intransitive verb. Only the high-intermediates and native speakers performed at above chance level on the object clitic items (82/150 and 86/100 respectively). Conversely all groups correctly identified the target picture on the DP and (to a lesser extent) the intransitive items. Pairwise Pearson's correlations between the correct comprehension of object clitics, DP objects and intransitive verbs show significant correlations at the .01 level. The r values are given in table 5.29.

	Object Clitic	DP	Intransitive
Object Clitic	-	.758**	.758**
DP	.758**	-	.891**
Intransitive	.758**	.891**	-

Table 5.29: Correlation results for different object types in comprehension task

Pairwise Mann Whitney U tests of the object clitic items given in table 5.30 reveals that the beginner and low-intermediate groups are not statistically significantly different from each other but all other comparisons are statistically

significantly different. The beginners and low-intermediate groups correctly chose the object clitic item on fewer occasions than the high-intermediates and the native speakers. The high-intermediates also were correct on significantly fewer occasions than the native speakers.

Group	beginner	low-int	high-Int	NS
beginner	-	.781	*.009	*.000
low-int	.781	-	*.004	*.000
high-Int	*.009	*.004	-	*.002
NS	*.000	*.000	*.002	-

Table 5.30: Significant differences in comprehension results for object clitic items

The pairwise Mann Whitney U tests in table 5.31 show that for the DP object results there were no statistically significant results between the groups.

Group	beginner	low-int	high-Int	NS
beginner	-	.916	.916	.199
low-int	.916	-	.916	.199
high-Int	.916	.916	-	.399
NS	.199	.199	.399	-

Table 5.31: Significant differences in comprehension results for DP items

Table 5.32 shows the results of the pairwise Mann Whitney U tests for the 5 test items with intransitive verbs. The native speakers were statistically significantly different from the beginners and low-intermediates but not the high-intermediates. The beginners and low-intermediates correctly picked the intransitive picture on significantly fewer occasions than the native speakers.

Group	beginner	low-int	high-Int	NS
beginner	-	1.000	.066	*.024
low-int	1.000	-	.106	*.045
high-Int	.066	.106	-	1.000
NS	*.024	*.045	1.000	-

Table 5.32: Significant differences in comprehension results for intransitive items

In summary, it appears that all learners were all able to identify the SVO ordered items (those with a DP object) at similar levels (60-66/75). Performance on the intransitive verbs (i.e. those with no object) was lower but again all

learners performed similarly and above chance levels (49-62/75). However, there was a clear distinction in the comprehension of object clitic items (S-Cl-V) with the beginners and low-intermediates correctly identifying 43-44/150 but the high-intermediates identifying 82/150.

5.5.3 Judgement task

In the grammaticality judgement task there were 16 items dealing with object clitics. These were divided between 8 grammatical and 8 ungrammatical items. The grammatical items consisted of 4 items with an object clitic (S-Cl-V) and 4 items with a DP object (SVO). The ungrammatical items consisted of 4 items with a postverbal object clitic (S-V-Cl) and 4 items with in which the object was omitted (SVnoO). As before, the results were coded into the acceptance or rejection of the item or an omission. The median, sum total of responses and ranges are given for each of the groups in table 5.33.

The results show that for the grammatical items all the groups accepted more than 50% of items across both structures. A Pearson's correlation shows a strong correlation between the acceptance of S-Cl-V and the acceptance of SVO (r=.547), which is significant at the .01 level. The beginners and low-intermediate groups both perform at approximately chance levels (27/60-33/60) on both S-Cl-V and SVO items. The other groups all perform at over 48/60 (80%) on these grammatical items.

Pairwise Mann Whitney U tests show that the beginners and low intermediates are not significantly different from each other on either S-Cl-V or SVO but they both are significantly different from all other groups as they accept fewer grammatical sentences than the other groups. The other groups are not significantly different from each other for S-Cl-V (table 5.34) or SVO (table 5.35).

As shown in table 5.33 the ungrammatical items on the judgement task consisted of 4 with a post-verbal object clitic (S-V-Cl) and 4 with an omitted DP object (SVnoO). The beginner group rejected more of the S-V-Cl items than

		grammatical						ungrammatical					
		S-Cl-V			SVO			S-V-Cl			SVnoO		
group		accept	reject	omit	accept	reject	omit	reject	accept	omit	reject	accept	omit
beginner	*median*	2	2	0	2	1	0	2	1	0	1	3	0
	sum	31/60	24/60	5/60	33/60	24/60	3/60	32/60	21/60	7/60	17/60	41/60	2/60
	range	0-4	0-3	0-2	1-3	1-3	0-1	0-3	0-3	0-2	0-2	2-4	0-2
low-int	*median*	2	2	0	2	2	0	2	2	0	2	2	0
	sum	27/60	33/60	0/60	33/60	27/60	0/60	36/60	24/60	0/60	36/60	24/60	0/60
	range	0-4	0-4	0	1-4	0-3	0	1-4	0-3	0	0-4	0-4	0
high-int	*median*	4	0	0	4	0	0	4	0	0	3	1	0
	sum	51/60	9/60	0/60	54/60	6/60	0/60	51/60	9/60	0/60	45/60	15/60	0/60
	range	2-4	0-2	0	3-4	0-1	0	1-4	0-3	0	0-4	0-4	0
low-adv	*median*	3	1	0	4	0	0	4	0	0	4	0	0
	sum	50/60	10/60	0/60	56/60	4/60	0/60	59/60	1/60	0/60	53/60	7/60	0/60
	range	2-4	0-2	0	3-4	0-1	0	3-4	0-1	0	2-4	0-2	0
high-adv	*median*	3	1	0	4.	0	0	4	0	0	3	1	0
	sum	48/60	12/60	0/60	53/60	7/60	0/60	55/60	4/60	1/60	43/60	16/60	1/60
	range	2-4	0-2	0	1-4	0-3	0	2-4	0-2	0-1	0-4	0-4	0-1
NS	*median*	4	0	0	4	0	0	4	0	0	3.5	.5	0
	sum	37/40	3/40	0/40	40/40	0/40	0/40	39/40	1/40	0/40	28/40	12/40	0/40
	range	2-4	0-2	0	4-4	0	0	3-4	0-1	0	0-4	0-4	0

Table 5.33: Grammaticality judgement results for object clitic items

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	1.000	*.009	*.009	*.009	*.007
low-int	1.000	-	*.009	*.009	*.010	*.007
high-Int	*.009	*.009	-	1.000	1.000	1.000
low-adv	*.009	*.009	1.000	-	1.000	.916
high-adv	*.009	*.010	1.000	1.000	-	.213
NS	*.007	*.007	1.000	.916	.213	-

Table 5.34: Significant differences in acceptance of grammatical S-Cl-V items

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	1.000	*.001	*.000	*.002	*.000
low-int	1.000	-	*.001	*.000	*.003	*.001
high-Int	*.001	*.001	-	1.000	1.000	.190
low-adv	*.000	*.000	1.000	-	1.000	.444
high-adv	*.002	*.003	1.000	1.000	-	.305
NS	*.000	*.001	.190	.444	.305	-

Table 5.35: Significant differences in acceptance of grammatical SVO items

SVnoO items (32/60 v. 17/60) but for all the other groups the rejection levels are similar. For both S-V-Cl and SVnoO items the number of correct rejections of these ungrammatical sentences increases across the groups although the low-advanced group outperformed the high-advanced group on both S-V-Cl and SVnoO rejection. A Pearson's correlation of the rejection of S-V-Cl and the rejection of SVnoO showed a strong correlation (r=.607), significant at the .01 level. Again as with the results from the grammatical items, pairwise Mann Whitney U tests for the S-Cl-V (see table 5.36) revealed no significant differences between the beginners and low-intermediates on the S-V-Cl items but significant differences between the beginners and the other groups as they (the beginners) rejected fewer postverbal object clitic items than the others. The low-intermediates were significantly different from the two advanced groups and the native speaker group as the low-intermediate group accepted more ungrammatical S-V-Cl items. The low-intermediates were not significantly different from either the beginners or the high-intermediates. The other groups were not significantly different from each other.

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	1.000	*.014	*.000	*.001	*.000
low-int	1.000	-	.114	*.001	*.014	*.010
high-Int	*.014	.114	-	.932	1.000	1.000
low-adv	*.000	*.001	.932	-	.932	1.000
high-adv	*.001	*.014	1.000	.932	-	1.000
NS	*.000	*.010	1.000	1.000	1.000	-

Table 5.36: Significant differences in rejection of ungrammatical S-V-Cl items

Table 5.37 gives the results of the pairwise Mann Whitney U tests for the correct rejection of ungrammatical items with no overt object (SVnoO). The beginners were significantly different from the other learner groups but not from the native speakers. This is due to lower rejection of these items by the native speakers (27/60). The beginners rejected fewer SVnoO items than the intermediate or advanced groups. The low-intermediate group was also significantly different from the low-advanced group, who rejected the most SVnoO items (53/60).

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	*.015	*.002	*.000	*.006	.064
low-int	*.015	-	.822	*.023	1.000	1.000
high-Int	*.002	.822	-	1.000	1.000	1.000
low-adv	*.000	*.023	1.000	-	1.000	1.000
high-adv	*.006	1.000	1.000	1.000	-	1.000
NS	.064	1.000	1.000	1.000	1.000	-

Table 5.37: Significant differences in rejection of ungrammatical SVnoO items

In summary, the beginners accept more of the grammatical items than they reject and this does not change if the grammatical sentence contains an object clitic (31/60) or a DP object (33/60). The beginners also reject the ungrammatical S-V-Cl order at similar levels (32/60). However, they incorrectly accept 41/60 of the ungrammatical 'no object' items. No other group demonstrates this disparity. Levels of acceptance of S-Cl-V and SVO rise across the groups (although the high advanced group dips below the low advanced group (48/60 v 50/60 for S-Cl-V and 53/60 v 56/60 for SVO). Levels of rejection of the ungram-

matical S-V-Cl and SVnoO also rise across the groups (however, again the high advanced performs slightly worse than the low-advanced). All the non-beginner learners perform in a target-like fashion (i.e. accept the grammatical, reject the ungrammatical) in over 60% of items except the low-intermediates only accept the grammatical S-Cl-V on 27/60 items.

5.5.4 Object clitic results across tasks

As with the negation and adverb tasks, the results for the object clitics come from three tasks. Figure 5.5 shows the performance on object clitics (S-Cl-V) across the three tasks. The percentages were calculated from the median number of S-Cl-V utterances out of the 15 obligatory contexts in the oral production task, the 10 object clitic items in the comprehension task and the 4 S-Cl-V items from the acceptability judgement task. All groups scored best on the judgement task and lowest on the production task, in line with the negation and adverb results.

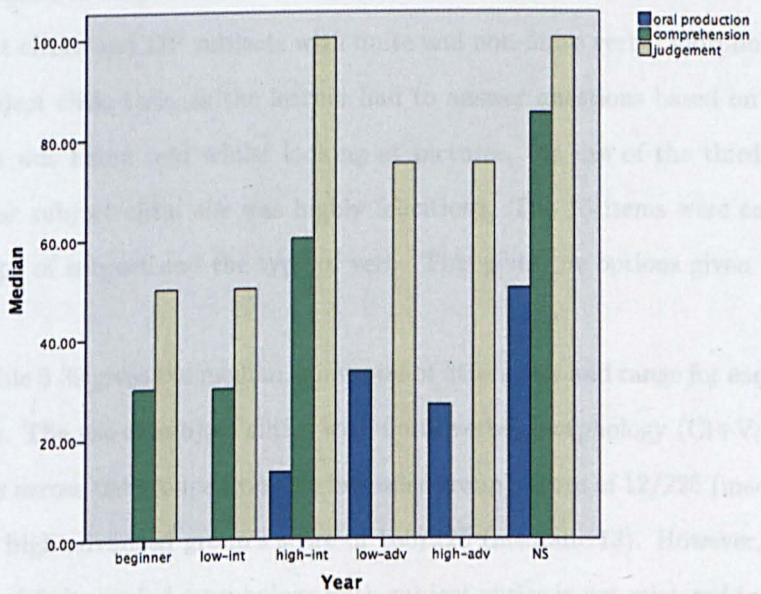

Figure 5.5: Use of preverbal object clitics (S-Cl-V) across tasks

A Pearson's correlation between the production of S-Cl-V and the acceptance

of S-Cl-V gave a correlation co-efficient of r=.423 and was significant at the .01 level. There was no correlation with the correct S-Cl-V comprehension results with either the production of S-Cl-V or the acceptance of S-Cl-V (r=.044 and r=.181 respectively). This suggests that if the learner produces object clitics, then he/she will also accept them on the judgement task.

5.6 Subject Clitics

The use of subject clitics and verbal morphology is tested by two methods: indirectly via an oral production task and directly through the grammaticality judgement task. There are no comprehension data in relation to the use of subject clitics.

5.6.1 Oral results

The use of subject clitics were not tested explicitly in the oral production tasks. As outlined in chapter 4.7.4 the object clitic task will be analyzed for the use of subject clitics and DP subjects with finite and non-finite verbal morphology. In the object clitic task, as the learner had to answer questions based on a story he/she was being told whilst looking at pictures, the use of the third person singular subject clitic *elle* was highly felicitious. The 15 items were coded for the type of subject and the type of verb. This gives the options given in table 5.38.

Table 5.39 gives the median, sum total of utterances and range for each of the groups. The use of subject clitics with finite verbal morphology (Cl+$V_{[+fin]}$) increases across the groups from the beginner group's score of 12/225 (median=0) to the high-advanced group's score of 186/225 (median=13). However, the increase of finite verbal morphology with subject clitics is not mirrored in the use of finite verb morphology with DP subjects, which remains stable with a median of 0. The sum scores range between 2/225 (low intermediates) to 17/225 (high intermediates and high advanced groups). There was no correlation between

Code	Description	Example
Cl+$V_{[+fin]}$	third person singular subject clitic followed by finite verb	elle mange
Cl+aux	third person singular subject clitic followed by auxiliary/ copula	elle est manger
Cl+$V_{[-fin]}$	third person singular subject clitic followed by non finite verb	elle manger
DP+$V_{[+fin]}$	third person singular DP followed by finite verb	la fille mange
DP+aux	third person singular DP followed by auxiliary/ copula	la fille est manger
DP+$V_{[-fin]}$	third person singular DP followed by non finite verb	la fille manger
other	omission, other form	c'est/ il y a je mange(r)

Table 5.38: Codes used with subject clitics

the production of a subject clitic with a finite verb and the production of the DP subject with a finite verb (Pearson's correlation co-efficient r=.-.190).

The use of an auxiliary with a subject clitic (Cl+aux) was attested in all groups although most frequently with the low-intermediate group (51/225). For DP subjects with an auxiliary, again this is attested in all groups although rare outside the beginners (36/225) and low-intermediates (22/225). Non-finite forms with both clitics and DP subjects are found in all the learner groups. Subject clitics with non-finite verbs are most common in the beginner and both intermediate groups (45/225, 60/225 and 37/225 respectively). DP subjects with non-finite verbs are rare for the high-intermediates (2/225) and the two advanced groups but more frequent for the beginners (60/225) and the low-intermediates (33/225).

Pairwise Mann Whitney U tests of the use of subject clitics with finite morphology gives the values in table 5.40. The beginners and low-intermediates are not significantly different from each other but are from all the other groups as they (the beginners and low-intermediates) use fewer subject clitics. No other comparison is statistically significant.

		beginner	low-int	high-int	low-adv	high-adv	NS
Cl+V[+fin]	*median*	0	1	12	13	13	13
	sum	12/225	16/225	152/225	183/225	186/225	120/150
	range	0-3	0-4	3-15	3-14	6-14	1-15
Cl+aux	*median*	0	1	0	1	1	1
	sum	5/225	51/225	8/225	16/225	10/225	11/150
	range	0-4	0-10	0-2	0-3	0-2	0-3
Cl+V[-fin]	*median*	0	1	1	0	0	0
	sum	45/225	60/225	37/225	9/225	4/225	0/150
	range	0-12	0-12	0-11	0-6	0-2	0
DP+V[+fin]	*median*	0	0	0	0	0	0
	sum	13/225	2/225	17/225	14/225	17/225	13/150
	range	0-6	0-1	0-9	0-10	0-7	0-7
DP+aux	*median*	0	0	0	0	0	0
	sum	36/225	22/225	1/225	1/225	2/225	0/150
	range	0-12	0-10	0-1	0-1	0-1	0
DP+V[-fin]	*median*	4	0	0	0	0	0
	sum	60/225	33/225	2/225	2/225	2/225	6/150
	range	0-11	0-12	0-1	0-1	0-1	0-5
other	*median*	2	1	0	0	0	0
	sum	54/225	41/225	8/225	0/225	4/225	0/150
	range	0-13	0-10	0-2	0	0-1	0

Table 5.39: Use of verbal morphology by subject type

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	1.000	*.000	*.000	*.000	*.001
low-int	1.000	-	*.000	*.000	*.000	*.001
high-Int	*.000	*.000	-	.296	.296	.891
low-adv	*.000	*.000	.296	-	1.000	1.000
high-adv	*.000	*.000	.296	1.000	-	1.000
NS	*.001	*.001	.891	1.000	1.000	-

Table 5.40: Significant differences in production of third person subject clitic with a finite verb (Cl+V[+fin])

Table 5.41 gives the significance results for the use of a subject clitic with an auxiliary or copula. The only difference to reach statistical significance was the comparison between the beginners and the low-advanced group. Considering the sum results in table 5.39, significant differences were expected to be found between the low-intermediate groups and the others. However, the distribution of the results show that the sum for the low-intermediate group (51/225) is due

to a polarization of the results with learners either scoring 0 or 9-10/15. The median score for this group is 1 and therefore no significant differences are found for this group.[12]

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	.093	.791	*.006	.227	.123
low-int	.093	-	.836	1.000	1.000	1.000
high-Int	.791	.836	-	.361	1.000	.984
low-adv	*.006	1.000	.361	-	.912	1.000
high-adv	.227	1.000	1.000	.912	-	1.000
NS	.123	1.000	.984	1.000	1.000	-

Table 5.41: Significant differences in production of third person subject clitic with an auxiliary verb (Cl+aux)

Table 5.42 gives the results of the pairwise Mann Whitney U tests for the use of non-finite verbal morphology with a subject clitic (Cl+$V_{[-fin]}$). The results show that there are no significant differences between the groups. This again appears to be due to the polarization of the results of the beginner, low-intermediate and high-intermediate groups with many learners either scoring 0/15 or over 11/15. The medians of these groups (0-1) are similar to the advanced and native speaker groups (median=0).

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	1.000	1.000	1.000	.789	.300
low-int	1.000	-	1.000	.300	.147	.060
high-Int	1.000	1.000	-	.346	.164	.060
low-adv	1.000	.300	.346	-	1.000	.717
high-adv	.789	.147	.164	1.000	-	.924
NS	.300	.060	.060	.717	.924	-

Table 5.42: Significant differences in production of third person subject clitic with a non-finite verb (Cl+$V_{[-fin]}$)

Turning now to the use of finite verbal morphology with a DP subject. Table 5.43 shows that no groups were statistically significantly different from each other in their use of a DP subject with a finite verb. This is in sharp

[12]As mentioned in footnote 3, the pairwise Mann Whitney U tests were corrected for false positives (type I errors) using the Holm-Bonferroni method. This method is a very conservative method of correction. If a less conservative method is used then the low-intermediate group is significantly different from the beginners, low-advanced and native speakers. However, the chances of a false positive (type I error) become greater so I have erred on the side of caution and used the Holm-Bonferroni method throughout.

contrast to the significant differences found in the use of subject clitics with a finite verb reported in table 5.40.

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	1.000	1.000	1.000	1.000	1.000
low-int	1.000	-	1.000	1.000	.529	1.000
high-Int	1.000	1.000	-	1.000	1.000	1.000
low-adv	1.000	1.000	1.000	-	1.000	1.000
high-adv	1.000	.529	1.000	1.000	-	1.000
NS	1.000	1.000	1.000	1.000	1.000	-

Table 5.43: Significant differences in production of DP subject with a finite verb ($DP+V_{[+fin]}$)

Table 5.44 gives the results of the pairwise Mann Whitney U tests for the production of a DP subject with an auxiliary verb (DP+aux). Again no significant differences were found between the groups, who all have a median of 0 despite some beginners and low-intermediates scoring over 10/15.

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	1.000	1.000	1.000	1.000	.991
low-int	1.000	-	.433	.433	.884	.433
high-Int	1.000	.433	-	1.000	1.000	1.000
low-adv	1.000	.433	1.000	-	1.000	1.000
high-adv	1.000	.884	1.000	1.000	-	1.000
NS	.991	.433	1.000	1.000	1.000	-

Table 5.44: Significant differences in production of DP subject with an auxiliary verb (DP+aux)

Table 5.45 gives the results for the use of a DP subject with non-finite verbal morphology ($DP+V_{[-fin]}$). The beginner group is significantly different from the other groups except the low-intermediates. No other comparison reaches significance. This is reflected in the beginner median score of 4 whereas the other groups have a median of 0. The beginners produce significantly more DP subjects with a non-finite verb than the other groups. Again this is different from the results for the use of a clitic with a non-finite verb, in which there were no significant differences despite variability within the groups (see table 5.42).

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	.399	*.001	*.001	*.001	*.044
low-int	.399	-	.305	.305	.305	1.000
high-Int	*.001	.305	-	1.000	1.000	1.000
low-adv	*.001	.305	1.000	-	1.000	1.000
high-adv	*.001	.305	1.000	1.000	-	1.000
NS	*.044	1.000	1.000	1.000	1.000	-

Table 5.45: Significant differences in production of DP subject with a non-finite verb (DP+$V_{[-fin]}$)

5.6.2 Judgement task

In the grammatical judgement task there were 8 items referring to the use of finite verbal morphology. These were divided equally between grammatical and ungrammatical and DP subject and subject clitic, i.e. two of each. Medians, sum totals and the range were calculated for each group are given in table 5.46.

All the groups performed well (median = 2) at accepting the grammatical items with a subject clitic. The beginners and low-intermediates, however, rejected over two thirds of the items with a DP subject and a finite verb (median =0 and 1 respectively). The other groups, however, accepted these grammatical items (median = 2). For the ungrammatical items the beginners performed at chance (50%) for rejecting both subject clitics and DP subjects with non-finite verbs. The low-intermediate group rejected non-finite verbs with subject clitics (24/30, median=2) but not with DP subjects (7/30, median=0). The other groups all rejected these items (median = 2) irrespective of subject type.

Pairwise Mann Whitney U tests were carried out on all the target responses. The results are given in the following tables for each group. Table 5.47 gives the results of the acceptance of the grammatical subject clitic followed by a finite verb and table 5.48 gives the same results but with a DP subject instead of a subject clitic. Table 5.49 gives the results for the rejection of a subject clitic followed by a non-finite verb and table 5.50 gives the same but with a DP subject.

		grammatical ([+fin]						ungrammatical [-fin]					
		Clitic /2			DP /2			Clitic /2			DP /2		
group		accept	reject	omit	accept	reject	omit	reject	accept	omit	reject	accept	omit
beginner	*median*	2	0	0	0	2	0	1	1	0	1	1	0
	sum	22/30	7/30	1/30	6/30	23/30	1/30	13/30	14/30	3/30	13/30	16/30	1/30
	range	0-2	0-2	0-1	0-2	0-2	0-1	0-2	0-2	0-1	0-2	0-2	0-1
low-int	*median*	2	0	0	1	1	0	2	0	0	0	2	0
	sum	25/30	5/30	0/30	10/30	20/30	0/30	24/30	6/30	0/30	7/30	23/30	0/30
	range	1-2	0-1	0	0-2	0-2	0	0-2	0-2	0	0-2	0-2	0
high-int	*median*	2	0	0	2	0	0	2	0	0	2	0	0
	sum	29/30	1/30	0/30	26/30	4/30	0/30	30/30	0/30	0/30	26/30	4/30	0/30
	range	1-2	0-1	0	0-2	0-2	0	2-2	0	0	1-2	0-1	0
low-adv	*median*	2	0	0	2	0	0	2	0	0	2	0	0
	sum	30/30	0/30	0/30	30/30	0/30	0/30	30/30	0/30	0/30	30/30	0/30	0/30
	range	2-2	0	0	2-2	0	0	2-2	0	0	2-2	0	0
high-adv	*median*	2	0	0	2	0	0	2	0	0	2	0	0
	sum	29/30	1/30	0/30	26/30	4/30	0/30	29/30	1/30	0/30	23/30	7/30	0/30
	range	1-2	0-1	0	0-2	0-2	0	1-2	0-1	0	0-2	0-2	0
NS	*median*	2	0	0	2	0	0	2	0	0	2	0	0
	sum	20/20	0/20	0/20	18/20	2/20	0/20	20/20	0/20	0/20	19/20	1/20	0/20
	range	2-2	0	0	1-2	0-1	0	2-2	0	0	1-2	0-1	0

Table 5.46: Grammaticality judgement results: subject type and verbal morphology

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	1.000	.360	.113	.360	.341
low-int	1.000	-	.620	.227	.620	.450
high-Int	.360	.620	-	1.000	1.000	1.000
low-adv	.113	.227	1.000	-	1.000	-
high-adv	.360	.620	1.000	1.000	-	1.000
NS	.341	.450	1.000	-	1.000	-

Table 5.47: Significant differences in acceptance of subject clitic with a finite verb

In table 5.47 the results show no significant differences between the groups for the acceptance of a finite verb with a subject clitic. On the acceptance of a DP with a finite verb (table 5.48) the beginners are significantly different from the other groups excluding the low intermediate group. The other groups are not significantly different from each other.

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	.126	*.001	*.001	*.002	*.007
low-int	.126	-	.126	.126	.295	.255
high-Int	*.001	.126	-	-	1.000	-
low-adv	*.001	.126	-	-	1.000	-
high-adv	*.002	.295	1.000	1.000	-	1.000
NS	*.007	.255	-	-	1.000	-

Table 5.48: Significant differences in acceptance of DP subject with finite verb

In terms of rejecting subject clitics or DPs with non-finite verbs (tables 5.49 and 5.50 respectively) then the groups perform similarly with the exception of the low-intermediates as discussed above. The beginners and low intermediates are not significantly different from each other. However, they are significantly different from all the other groups except the comparison beginners and high-advanced groups on the rejection of DP subjects with non-finite verbs. No other comparisons reach statistical significance. This is due to the beginners and low-intermediates rejecting significantly fewer non-finite items (with either a DP or subject clitic as a subject) than the other groups.

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	.792	*.001	*.000	*.001	*.001
low-int	.792	-	*.002	*.000	*.002	*.003
high-Int	*.001	*.002	-	.557	1.000	1.000
low-adv	*.000	*.000	.557	-	.557	.557
high-adv	*.001	*.002	1.000	.557	-	1.000
NS	*.001	*.003	1.000	.557	1.000	-

Table 5.49: Significant differences in rejection of subject clitic with a non-finite verb

Group	beginner	low-int	high-Int	low-adv	high-adv	NS
beginner	-	.556	*.015	*.000	.119	*.010
low-int	.556	-	*.001	*.000	*.005	*.001
high-Int	*.015	*.001	-	.227	.759	.759
low-adv	*.000	*.000	.227	-	.064	.759
high-adv	.119	*.005	.759	.064	-	.556
NS	*.010	*.001	.759	.759	.556	-

Table 5.50: Significant differences in rejection of DP subject with a non-finite verb

5.6.3 Subject Clitics across Tasks

Subject clitics and the use of finite verbal morphology was tested through the oral production task and the acceptability judgement task. The oral task made the use of a subject clitic highly felicitous but it was not ungrammatical to use a DP subject. The results for both tasks are shown graphically in figure 5.6. The graph shows, all the learners performed at ceiling (100% or 2/2) level for the acceptance of subject clitics with a finite verb but the oral production task results show that the beginner and low-intermediate groups avoid using subject clitics. However, despite this, a Pearson's correlation between the oral production of a subject clitic with a finite verb and the acceptance of the same produces a significant correlation at the .01 level (r=.418). This suggests that learners who produce a subject clitic with a finite verb also accept this structure.

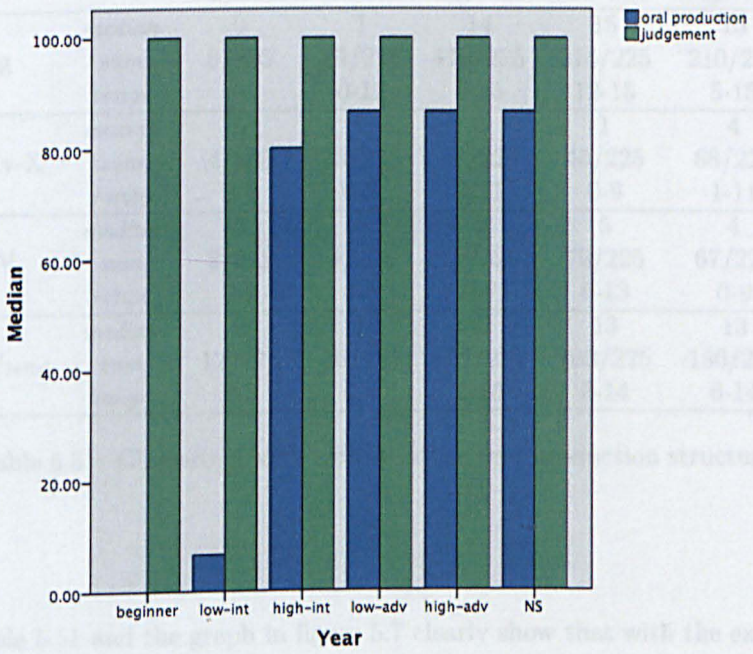

Figure 5.6: Subject clitics with finite verbal morphology (Cl+$V_{[+fin]}$) across tasks

5.7 Clustering

The main question underpinning this study was to examine if learners would adopt the French parameter setting of verb raising. So far, I have presented the results in terms of each of the individual structures (negation, adverbs etc) but in order to determine if this is a parameter setting change then we need to establish if learners show a clustering of properties, i.e. if the learner is consistent across the different structures. Table 5.51 pulls together the results on each verb raising structure, i.e. for negation V-Neg, for adverbs V-Adv-X, for object clitics S-Cl-V and for subject clitics Cl+$V_{[+fin]}$. I have previously shown correlations between the oral production of each of these structures and the acceptance of the same in the judgement task so I will concentrate on the oral production task here. There were 15 obligatory contexts for each of the oral production tasks.

		beginner	low-int	high-int	low-adv	high-adv	NS
V-Neg	*median*	0	1	14	15	15	15
	sum	0/225	44/225	179/225	214/225	210/225	150/150
	range	0	0-12	0-15	12-15	5-15	15-15
V-Adv-X	*median*	0	1	2	1	4	10.5
	sum	4/225	18/225	48/225	45/225	68/225	101/150
	range	0-2	0-7	0-11	0-9	1-11	6-13
S-Cl-V	*median*	0	0	2	5	4	7.5
	sum	2/225	4/225	29/225	79/225	67/225	65/150
	range	0-2	0-3	0-7	0-13	0-9	1-11
Cl+V$_{[+fin]}$	*median*	0	1	12	13	13	13
	sum	12/225	16/225	152/225	183/225	186/225	120/150
	range	0-3	0-4	3-15	3-14	6-14	1-15

Table 5.51: Clustering: verb raising across oral production structures

Table 5.51 and the graph in figure 5.7 clearly show that with the exception of the low-advanced learners performance on adverbs, the groups improve across all the different structures. There is no evidence of verb raising in the beginner group as there are no or very few instances of verb raising with negation, adverb placement or object clitics. There is some use of subject clitics with finite verbs (12/225) but again this is infrequent (median=0). The low-intermediate group performs similarly but there is a clear increase in the use of postverbal negation (0/225 to 44/225) although this is still in less than 20% of utterances (median=1). The high-intermediate group shows a dramatic increase in the use of postverbal negation and subject clitics with finite verbs (median=14 and 12 respectively). There are also increases in the use of postverbal adverbs and preverbal object clitics but to a lesser extent than the negation and subject clitic results (median=2). Instances of preverbal clitics and postverbal adverbs remain low thoughout (less than 50%). The use of preverbal clitics increases in the low-advanced group (79/225) with a median of 5. The use of postverbal adverbs doesn't increase until the high-advanced group (median-4, 68/225). These results suggest that the use of negation and subject clitics with finite morphology emerge before preverbal object clitics and finally postverbal adverbs.

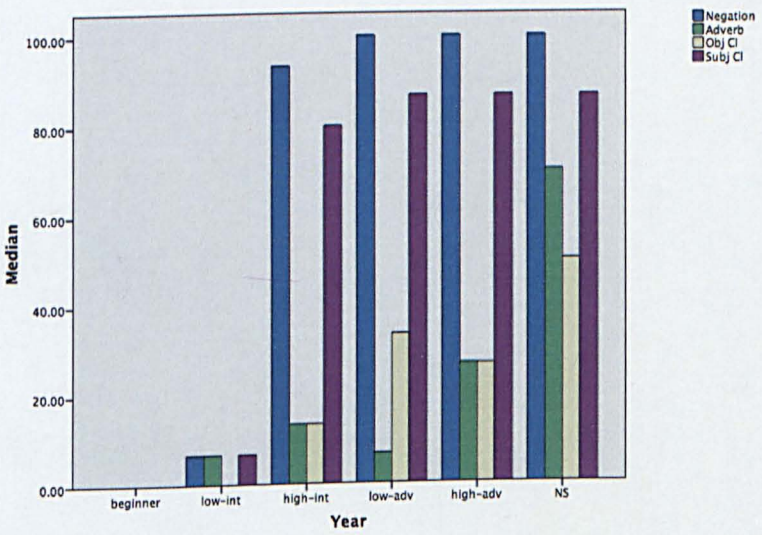

Figure 5.7: Clustering: verb raising across oral production tasks

Pearson's correlations were carried out between the different structures. The results are given in table 5.52. They show highly significant correlations at the .01 level for all structures. This suggests that while verb raising may occur earlier with some structures than others that there is a clustering of the properties in oral production.

	Negation	Adverb	Obj Cl	Sub Cl
Negation	-	.592**	.616**	.846**
Adverbs	.592**	-	.391**	.547**
Obj Cl	.616**	.391**	-	.668**
Sub Cl	.846**	.547**	.668**	-

Table 5.52: Correlation results for verb raising with different structures: oral production

The results from the acceptability judgement task also show the same significant correlations as in the oral production tasks as shown in table 5.53.

The significance of these results and how they can distinguish between the different theories outlined in chapter 3, will be discussed in the next chapter.

	Negation	Adverb	Obj Cl	Sub Cl
Negation	-	.497**	.407**	.494**
Adverbs	.497**	-	.635**	.404**
Obj Cl	.407**	.635**	-	.307**
Sub Cl	.494**	.404**	.307**	-

Table 5.53: Correlation results for verb raising with different structures: judgement

Chapter 6

Discussion

6.1 Introduction

In this chapter I will discuss the results presented in the results chapter (chapter 5) in light of the predictions made in the methodology chapter (chapter4). Firstly each of the Initial State theories' predictions will be examined in terms of the results before concluding which of the three theories best fits, if any. I will then repeat the same process for the three post-Initial State theories tested.

6.2 Initial State theories

The three Initial State theories tested are Full Transfer/Full Access (Schwartz and Sprouse, 1996), Organic Grammar (Vainikka and Young-Scholten, 1996, 2005) and Modulated Structure Building (Hawkins, 2001a). Predictions made by each of these theories for the L2 acquisition of French by instructed English speakers were given in sections 4.3.1, 4.3.2 and 4.3.3. These will be repeated in the relevant sections below before considering how the data given for the beginner learners supports or counters the predictions made.

6.2.1 Full Transfer/Full Access

Full Transfer/Full Access (FT/FA) argues that the Initial State of L2 acquisition comprises of full access to UG but also that the learner transfers all the knowledge of the L1 into the L2. FT/FA makes the following predictions for English speakers learning L2 French (repeated from section 4.3.1).

(6.1) Functional categories will be present from the outset.

(6.2) There will be evidence of L1 transfer in functional categories, i.e. L1 English learners of French will initially hypothesize a weak uninterpretable tense feature so adverbs and negation may appear before lexical verbs.

(6.3) Re-setting to the target L2 feature is possible given sufficient input.

If functional categories are present from the outset (prediction 6.1), we would expect to find evidence that learners are using structures associated with IP, i.e. negation, adverbs, object or subject clitics. In terms of the oral production of negation (see table 5.5), the beginners did not produce many clear-cut instances of a Neg projection with lexical verbs. Sentences with NegP were primarily with an auxiliary or copula (69/225, 31%, median=2/15). Rather they predominantly used a variety of idiosyncratic structures, e.g. omission of *pas* or chunks. The comprehension results showed that they correctly understood negation on a median of 6/10 occasions (see table 5.9) and accepted negative items on the acceptability judgement task again on a median of 4/8 items (see table 5.11) but this is only chance level.

The adverbs results given in section 5.4, however, do show some evidence of an IP projection. Beginner learners use adverbs in unambiguously IP internal positions (i.e. preverbal adverbs (Adv-V) or post-verbal adverbs with an object (V-Adv-X)) in 86/225 (38%) of utterances. Other utterances consisted of sentence final adverbs or items with either the adverb or the verb omitted. Use of preverbal adverbs was the most common production by these beginners (see

table 5.17). The comprehension results show that they correctly identified the use of adverbs in 100/150 (66%) of occasions (table 5.20). The median value was 6/10. The acceptability judgement data (see table 5.22) also show that the beginners correctly accepted post-verbal adverbs with an object on 76/120 occasions (63%, median = 5/8).

The object clitic results show that the beginners are clearly producing SVO orders in their oral production (see table 5.26) but there is no evidence of object clitics (one learner uses 2 but no other learner produces any). SVO orders are not sufficient by themselves to support an IP projection as the learner could still be only projecting VP. However, the subject clitic results could shed some light on whether SVO orders may be in IP. The use of subject clitics was argued in section 2.5 to be associated with the projection of IP. Table 5.39 shows that subject clitics were present in 62/225 (28%)[1] of utterances made by the beginners. This does not provide evidence against an IP projection but neither does it confirm that IP is definitely projected. The results from the comprehension of object clitics (table 5.28) also do not provide support for the projection of IP as the beginners only correctly identify the object clitic target picture in 44/150 (29%) of occasions (median=3/10). However, they correctly identify DP objects and intransitives on 60/75 (80%, median=4/5) and 49/75 (65%, median=3/5) of occasions respectively. The acceptability judgement task (see table 5.33) also does not provide conclusive evidence for the projection of IP. The beginner learners perform at just above chance levels on both the acceptance of sentences with a subject clitic (SCV) and sentences with a DP object (SVO) with acceptance rates of 31/60 (52%) and 33/60 (55%) respectively.

The second prediction made by FT/FA argues for L1 transfer in the initial state of L2 acquisition. For negation we would expect to find learners using negation before lexical verbs and transferring the English requirement of a verbal element (auxiliary, do-support or modal) before negation. Table 5.5 shows that in oral production, the beginners do not produce any instances post-verbal

[1]This figure includes subject clitics used with finite, auxiliaries and non-finite verbs.

negation. There is some evidence of pre-verbal negation with learners producing 40/225 (18%) utterances, however, these utterances appear to be restricted to a subset of learners as the median score is 0 with a range of 0-9. The most common negative structure produced is with an auxiliary or copula element before the negation (auxNeg). Learners produce negation with an auxiliary/copula on 69/225 (31%, median=2/15). However, the figure is still low (31%) as beginners appear to use a lot of idiosyncratic structures including the omission of *pas*, negation at the end of a sentence or in a chunk (see section 5.3.1 and table 5.4). The comprehension task does not test for L1 transfer so those results are not relevant to this prediction. The acceptability judgement task, however, shows that beginners accepted the ungrammatical negative items, which contained preverbal negation (for example, *elle ne pas joue au golf*) on 37/60 (62%, median =3/4). There were no items on the judgement task that tested the use of an auxiliary with negation (e.g. *elle n'est pas jouer au golf*). This could be taken as support for the beginners transferring an absence of verb raising with lexical verbs.

The results for the use of adverbs in oral production (see table 5.17) show that the single most common structure in the beginners is the pre-verbal placement of adverbs with 82/225 (36%, median=7/15) utterances falling into this category. The high median value suggests that for most learners almost half of all their utterances containing an adverb show evidence of L1 transfer. The judgement task results are similar (see table 5.22) as learners accept 28/60 (47%, median =2/4) ungrammatical pre-verbal adverbs.

The oral production of object clitics does not reveal any evidence of L1 transfer. There is only one instance of a post-verbal clitic but it is unclear if the learner was genuinely using '*la*' as a clitic or as a determiner and he didn't complete the utterance, i.e. he failed to produce the noun. In the judgement task (see table 5.33), learners accepted the ungrammatical post-verbal clitic (SVC) in 21/60 (35%). The production or judgement of subject clitics cannot inform about L1 transfer.

In prediction 6.3, Schwartz and Sprouse argue that re-setting of the parameter from weak to strong uninterpretable features is possible given sufficient input. The data for the non-beginner groups will be discussed in section 6.3 when considering the predictions made by the Representational Deficit Hypothesis, so I will defer discussion of this hypothesis to that point.

The results discussed in light of the predictions made by FT/FA support the existence of IP in the oral production, comprehension and judgements of some of these beginner learners. As a group, the beginners produce/accept IP structures in approximately 30% of occasions. However, Schwartz and Sprouse argue for 75% as their criterion for acquisition. No structure reaches this level when considering the group results. The group results mask the individual scores which suggest that 4 out of 15 learners are projecting IP in over 75% of occasions. Organic Grammar argues for a criterion of 60%, in which case a further 3/15 learners could be claimed to project IP. Proponents of Organic Grammar and MSB will argue that these learners are no longer at the Initial State. When IP is projected, there is also evidence for L1 transfer in the production of negation, in terms of the use of an auxiliary/copula with negation, and the production and judgement of adverbs.

I will now turn to the predictions made by Organic Grammar and then Modulated Structure Building before evaluating which of the three theories can best account for the initial state of L2 acquisition for instructed English learners of French.

6.2.2 Organic Grammar

Organic Grammar (formerly Minimal Trees) argues that learners build the syntactic tree in a step-wise fashion from the bottom up. They argue against any transfer from the L1 in functional categories, in this case there should be no evidence of transfer of the English weak uninterpretable Tense feature into the beginners L2 French. Organic Grammar makes the following predictions, which were initially outlined and discussed in section 4.3.2.

(6.4) Initial stage with no evidence of functional projections - i.e. a bare VP with no tense or agreement beyond default forms.

(6.5) Functional projections will emerge gradually.

(6.6) No L1 transfer of functional projections, i.e. once tense is acquired then verb raising should be obligatory (at least 60% on VYS criteria): negation and adverbs should follow the finite verb.

Prediction 6.4 suggests that there will be no evidence of functional projections. We would therefore not expect to find clear evidence of NegP, sentence internal adverbs or object clitics. The results given in table 5.5 show a large number of 'other' idiosyncratic uses of negation that do not provide evidence of a NegP. The beginners use these 'other' structures in 83/225 utterances (37%, median=5/15). However, it should be noted that there is a large range from 0-15. The judgement task results (see table 5.11) show that the beginners accept the grammatical use of negation in 55/120 (46%, median=4/8). This is at approximately chance levels. The comprehension task suggests that learners comprehend the negative items in 81/100 (81%, median=6/10) of occasions but this may be due to semantic rather than syntactic processing.

The use of adverbs again does not conclusively show an IP internal adverb projection. As reported in table 5.17 adverbs are used inside the sentence in 86/225 (38%) of utterances in the oral production task. The similar level of 'other' utterances (99/225, 44%, median =5/15) suggest that these beginner learners may be avoiding putting the adverb inside the sentence, which would require a functional projection. The comprehension task (table 5.20) and judgement task (table 5.22), however, both show that learners correctly comprehend 100/150 (66%, median=6/10) and correctly accept 76/120 (63%, median=5/8) of items on the respective tasks. Taken together the results from the comprehension and judgement tasks suggest that while learners may not produce IP, it does form part of their mental representation.

The beginners do not produce object clitics either pre or post-verbally (see table 5.26). They predominantly use SVO structures, which do not necessarily require the projection of IP. The comprehension results given in table 5.28 suggest that there is a difference in the comprehension of items with an object clitic and those with a DP object or even an intransitive verb. Beginners comprehend 44/150 (29%, median =3/10) of object clitic items but 60/75 (80%, median = 4/5) of items with a full DP object and 49/75 (65%, median =3/5) of items with an intransitive verb. This suggests that beginners are able to process sentences that can be accommodated under VP but not those which require the projection of IP, i.e. sentences with object clitics. The judgement task results (see table 5.33) do not show this disparity as the learners accept both grammatical SCV and SVO (i.e. sentences with an object clitic or a DP object) equally and at just over chance levels. Acceptance of an object clitic stands at 31/60 (52%, median =2/4) and acceptance of a DP object is 33/60 (55%, median=2/4).

In terms of the production of subject clitics with finite verbs, table 5.39 shows that beginner learners produce very few subject clitics with either an auxiliary (5/225, 2%, median=0/15) or a finite lexical verb (12/225, 5%, median=0/15). This suggests that the learners are not producing IP and are still in the VP stage.

Prediction 6.5 states that functional projections will emerge gradually. Vainikka and Young-Scholten (1994: 289) argue that the first functional projection used by learners (FP) is triggered by the use of auxiliaries. The use of negation with an auxiliary (as reported previously in relation to prediction 6.1) can be argued to either be evidence of transfer from English or the first emergence of functional projections. The beginner learners are using post-verbal negation with an auxiliary in 69/225 (31%, median=2/15) utterances but never with a lexical verb (see table 5.5, which would be consistent with an analysis as the first emergence of a functional projection. However, this is in contrast to the use of subject clitics reported above (table 5.39) as learners only use a subject clitic with an auxiliary in 2% of utterances. The different levels of auxiliary use in

these two tasks (31% versus 2%) could be analyzed as providing support for a gradual emergence of the syntactic structure if subject clitics only appear when IP (not FP) is projected. As discussed under prediction 6.4, the results of the comprehension of negation and the judgement of negative sentences shows that learners are at below chance levels for the judgement task (46%) and above it for the comprehension task (81%).

The results from the adverb task show that there is evidence of a functional projection for some learners but the group results do not reach the 60% criterion level. Table 5.17 shows that 86/225 (38%) utterances show sentence internal adverbs, i.e. utterances that require some form of functional projection. Closer examination of the individual results show that 5 of the 15 learners produce Adv-V or V-Adv-X orders in over 60% of utterances. This suggests that for these 5 learners IP (or at least FP) is established. The comprehension and judgement results show that the learners are target-like in 66% and 63% of occasions respectively (tables 5.20 & 5.22). As reported for prediction 6.4, the object clitic results do not show any evidence of a functional projection as the learners do not produce any object clitics in the oral production task (table 5.26). The comprehension task (table 5.28) also shows low levels of object clitic comprehension (29%) but chance levels of acceptance on the judgement task (52%, table 5.33).

The third prediction made by Organic Grammar (prediction 6.6) is that there is no evidence of L1 transfer in the functional domain. We should, therefore, not expect to find English word orders associated with the projection of IP in these beginners. The oral production results for the use of an auxiliary with negation has already been discussed above as this could be interpreted as either the initial projection of a functional category or transfer from English. However, given the subject clitic results for the use of a subject clitic with an auxiliary (2% of utterances), it appears tenuous to ascribe the 31% of negative utterances with an auxiliary to merely the projection of a new functional category. It perhaps seems likely that L1 transfer plays a role. The comprehension and judgement

tasks did not specifically address the use of an auxiliary with negation.[2] The clearest evidence for L1 transfer comes from the use of adverbs. As reported for prediction 6.2, of the 86/225 adverbs that are unambiguously projecting an IP (or FP), 82 utterances had preverbal placement of the adverb, i.e. the same word order as in English. This was the most frequent structure produced by the beginners. In the judgement task, learners also accepted preverbal adverbs in 27/60 of items (45%, median=2/4). This contradicts prediction 6.6 made by Organic Grammar.

The lack of evidence for functional projections in the beginners as a group supports the first two predictions made by Organic Grammar. However, the individual results show greater variability with 7/15 learners consistently projecting IP or FP with negation and/or adverbs. Proponents of Organic Grammar would argue that these learners are no longer in the Initial State and have progressed to FP. The most problematic data for OG is the level of L1 transfer with adverbs and possibly with negation (and an auxiliary).

Having reviewed the results in light of the three predictions made by Organic Grammar, I will now turn to the predictions made by the final theory of the Initial State examined in this thesis, Modulated Structure Building.

6.2.3 Modulated Structure Building

Modulated Structure Building is a hybrid theory that proposes a gradual development in the projection of the tree, i.e. first VP then IP but allows for L1 transfer in the functional domain at each point. MSB makes the following predictions, which are the same as some of the predictions made by OG and FT/FA.

(6.7) Initial Stage with no evidence of functional projections - i.e. bare VP with no tense or agreement beyond default forms.

(6.8) Functional projections will emerge gradually

[2]Unfortunately none of the ungrammatical sentences in the judgement task were of the type *elle n'est pas jouer au golf*. In retrospect this was an oversight.

(6.9) When functional projections emerge there will be evidence of L1 transfer, e.g. Adv-V instead of V-Adv.

(6.10) Learners will re-set to L2 settings with sufficient input.

Predictions 6.7 & 6.8 are the same as predictions 6.4 & 6.5 made by Organic Grammar. Prediction 6.9 is similar to prediction 6.2 made by FT/FA although it allows for the emergence of projections rather than all the projections being available from the outset. Finally prediction 6.10 is the same as prediction 6.3 made by FT/FA and which will be discussed in section 6.3 dealing with development. As these predictions have already been discussed in terms of the FT/FA and OG, I will only briefly mention evidence in support or against each.

Prediction 6.7 claims that functional projections will not be present in the Initial State of L2 acquisition. In the oral production data for negation, the beginner learners do not show evidence of NegP except with auxiliaries (69/225, 31%, median =2). The most common structure for the use of negation was the 'other' category, which included idiosyncratic use of negation, for example in a chunk or at the end of the sentence. 'Other' uses of negation were found in 83/225 utterances (37%, median=2). The comprehension data and judgement data show that the beginners comprehend negative sentences (81/100, 81%, median=6/10) although they judge fewer to be acceptable (55/120, 46%, median=4/8). The adverb data also suggests the use of structures that do not provide evidence for the projection of IP. The beginners use 'other' structures, often either sentence final adverbs or verbless utterances, in 99/225 (44%, median=5/15) of utterances. However, they correctly comprehend the adverb in 100/150 (66%, median=6/10) of items and accept it 76/120 (63%, median=5/8) of items on the judgement task. The beginners do not produce object clitics and the use of subject clitics with finite verbs is rare (5%).

Prediction 6.8 suggests that functional projections will emerge gradually. As discussed for prediction 6.5 the evidence for the projection of IP comes from the production of negation with an auxiliary and the use of adverbs inside the

utterance. Object clitics were not used and subject clitics appeared with finite verbs in only 5% of utterances. The use of negation with an auxiliary at 31% suggests the presence of NegP, part of IP, and the use of an adverb within the sentence (38%) also requires IP to project. However, these percentages are low and certainly do not argue that IP is definitely projecting for all learners but rather that some learners are starting to project IP. The comprehension results also show high levels for the comprehension of negation and adverbs (81% and 66% respectively) suggesting that IP may present in the learners mental representation if not in their production (although the caveat that these results may be due to semantic processing remains). However, the comprehension results for object clitics, which require IP to be projected, show much lower rates of acceptance (29%). In the judgement results, learners perform less well on the negation part (46%) but similarly on the adverbs section (63%). Surprisingly learners also accept 56% of the object clitic items. This suggests that IP is not fully established in these learners but is emerging gradually.

Prediction 6.9 argues that transfer from English may be evident in the beginners L2 French productions. Indeed, the evidence from the use of negation with an auxiliary and Adv-V utterances suggest there is L1 transfer. Learners use an auxiliary with negation (in what appears to be an attempt at the English present progressive, which is ungrammatical in French) on 69/225 (31%, median=2/15) of utterances and they use preverbal adverbs (Adv-V) in 82/225 (36%, median=7/15). In the judgement task, the beginners accept the ungrammatical preverbal adverb word orders in 28/60 (47%, median=2) but this is close to chance.

In this section, I have reviewed the results given in chapter 5 in light of the predictions made by Modulated Structure Building. I will now conclude the discussion of the Initial State by summarizing in the next section which of the theories receives the most support from these results.

6.2.4 Summary

The predictions made by Full Transfer/Full Access, Organic Grammar and Modulated Structure Building were considered in the previous sections in light of the results from the L1 English instructed L2 French learners tested. The results appear to show some support for FT/FA with learners showing evidence of L1 transfer, particularly in adverb placement and possibly also in the use of negation with an auxiliary verb. However, there was not sufficient evidence for the projection of IP in all these learners. Only 4/15 learners produced utterances that required IP on over 75% of utterances. The comprehension results are indicative of IP in terms of negation and adverbs but not object clitics. The judgement results for the adverb items also suggest that IP is projecting but these results are not mirrored in the negation and object clitic items. The oral production tasks show high levels of 'other' structures which do not necessarily involve the projection of IP. The lack of evidence for the projection of IP supports Organic Grammar's view that learners do not transfer all their knowledge of the L1 and initially only project lexical categories. However, the evidence of L1 transfer which supports FT/FA also counts against OG. The third theory is Modulated Structure Building. The results that show that learners do transfer from their L1 in the functional domain is consistent with MSB as is the gradual development in functional categories. I suggest, therefore, that the results of the beginner learners tested in this study provide support for a Modulated Structure Building account of the Initial State of L2 acquisition.

6.3 Post-Initial state theories

The empirical study reported in the previous chapters also set out to test between three theories of development post Initial-State. These three theories are Missing Surface Inflection Hypothesis (Prévost and White, 2000), Representational Deficit Hypothesis (Hawkins and Chan, 1997), and Feature Reassembly (Lardiere, 2008). Predictions were made for each of these theories in sections

4.4.1, 4.4.2 and 4.4.3. I will evaluate each of these predictions in turn in light of the results presented in chapter 5.

6.3.1 Missing Surface Inflection Hypothesis

Missing Surface Inflection Hypothesis (MSIH) argues for a dichotomy between syntax and morphology. In other words learners can have target-like syntax (in this case verb raising) but have persistent problems with inflectional morphology. (This is in contrast to theories like Organic Grammar which use the production of morphology as evidence for a syntactic projection (IP) and conversely the absence of morphology as evidence for the lack of a syntactic projection.) The predictions made by MSIH outlined in section 4.4.1 are repeated below:

(6.11) Learners may produce non-finite forms in finite contexts, including in verb raising contexts.

(6.12) Learners may produce non-finite forms with subject clitic pronouns as well as DPs.

(6.13) Optionality between finite and non-finite forms in finite contexts may persist to advanced stages.

(6.14) There will be clear evidence of a dissociation between syntax and morphology.

As the predictions outlined by MSIH are all related to the production of inflectional morphology only the subject clitic tasks will be discussed in light of this theory. Subject clitics were tested as part of the grammaticality judgement task and the object clitic oral production task was also analyzed for the use of subject clitics and finite verbal morphology. This was because in the object clitic oral production task the use of a subject clitic was most felicitous unlike the negation/adverbs oral production task. However, prediction 6.11 concerns the use of non-finite forms appearing in finite contexts. Therefore discussion of

prediction 6.11 will focus on verbal morphology with a subject clitic as subject clitics require a finite context.

The oral production results given in table 5.39 show that the use of a subject clitic with a non-finite verb is rare in all the learner groups. The median scores for the 15 contexts are between 0 and 1. However, this apparent low median disguises the large range of responses which persist in all but the high-advanced group. For the beginners and low-intermediates the use of a subject clitic and non-finite verb form ranges between 0-12. The range of high-intermediate scores is between 0-11. This lessens to 0-6 for the low-advanced and finally to 0-2 for the high-advanced. It appears that a small number of learners predominantly use non-finite verbal morphology with subject clitics thus supporting prediction 6.11 for a minority of learners.[3]

Prediction 6.12 suggests that non-finite forms will appear with subject clitics as well as DP subjects. As was just shown they do appear with subject clitics and table 5.39 also shows that non-finite verbal morphology appears with DP subjects. The median values for the beginner group is 4/15 but this disguises a range of 0-11. The low-intermediate also range between 0 and 11 despite a median value of 0. The beginners do not appear to make a distinction between the use of non-finite verbs with a subject clitic (45/225, 20%) and with a DP subject (60/225, 27%) although the median score is higher for a DP subject with non-finite verbal morphology (median=4 versus median=0). This suggests again that for some learners non-finite verbal morphology is used frequently but for most learners it is not. These results support prediction 6.12 for a minority of learners.

Prediction 6.13 claims that optionality in the use of finite and non-finite verb forms in finite contexts can persist to advanced stages. The oral production task results show that although the median values for the production of non-finite verbs with a subject clitic are low (between 0 and 1), the range of results (0-12)

[3]An alternate view is that these learners are producing weak pronouns as in English and not necessarily projecting IP. The only way to disambiguate this would be to consider the use of non-finite verbs in sentences with negation and adverbs. This analysis will be carried out in future research.

suggest that a minority of learners use non-finite verbs in finite contexts. The range of results decreases across the groups, i.e. the more proficient the group then there is less variability within the group. However, in the low-advanced group one learner still uses a non-finite verb on 7/15 occasions (6 with a subject clitic, 1 with a DP subject) and another learner on 4/15 (3 with a subject clitic and 1 with a DP subject). It should be stressed that these represent 11/225 total utterances for the group so are a very small minority. Moreover, given the difficulty in determining a non-finite form from an imperfect form (e.g. *elle regarder* versus *elle regardait*), it is not impossible that these learners were using the imperfect despite the apparent present tense context. It is possible that the evidence of the use of non-finite forms in the oral production task does not disconfirm prediction 6.13 but it does not provide substantial support for it. The results of the grammaticality judgement task also do not provide support for the persistent optionality of non-finite forms in finite contexts. Table 5.46 shows that levels of rejection of non-finite verbs with either a subject clitic or a DP subject increases across the groups. The beginners perform at approximately chance levels in rejecting non-finite verbs with either a subject clitic or a DP subject (13/30 for each condition). The low-intermediates reject more non-finite forms with a subject clitic (24/30) than with a DP subject (7/30) but the subsequent groups almost all non-finite verbs. However, the high-advanced group only reject 23/30 non-finite verbs with DP subjects. These results do not support the prediction of persistent optionality. However, prediction 6.13 claims that this optionality can persist not that it must persist. Therefore these data cannot be counted as evidence against it either.

Prediction 6.14 claims that there will be a clear dissociation between morphology and syntax. The results discussed in light of the previous 3 predictions made by Missing Surface Inflection suggest that for some learners non-finite forms can and do appear in finite contexts. These forms are a minority of cases but are present in the oral productions and judgements of the beginners and low-intermediate learners and occasionally with the other groups. The evidence

for this is not conclusive and provides limited support for the MSIH.

I will now examine the predictions made by the Representational Deficit Hypothesis before turning to those made by Feature Reassembly.

6.3.2 Representational Deficit Hypothesis

The Representational Deficit Hypothesis argues that parameter re-setting is not possible and that learners are constrained by the options available in the L1 (Hawkins and Chan, 1997). RDH makes the following predictions for English learners of French, which are repeated from section 4.4.2.

(6.15) Learners may not reset the parameter to allow verb raising.[4]

(6.16) Learners may use other UG constrained options available in the L1 to show the appearance of verb raising.

(6.17) The underlying syntactic representation of the L2 will be the L1.

The evidence relevant to prediction 6.15 comes from the results on the clustering of verb raising structures presented in section 5.7. If prediction 6.15 is correct then we would not expect the production of verb raising with negation, adverbs and object clitics as well as the use of subject clitics with finite verbal morphology to cluster together. However, as the correlation results in table 5.52 shows, the use of verb raising with all the four elements tested (negation, adverbs, object and subject clitics) correlates at highly significant levels ($p \leq .01$).

However, prediction 6.16 argues that learners may use other UG constrained options from the L1 to give the appearance of parameter resetting and prediction 6.17 that the underlying representation of the L2 will be the L1. In this case we would expect to find learners to produce verb raising with negation as in English but not with adverbs, i.e. SVNegX but also Adv-V. The relevant group data

[4]If Lasnik (2007) is correct that English does have verb raising then it is not possible to use evidence from English learners of French to argue for/against RDH. The question of L2 acquisition becomes one of transfer of features from the L1 which are used slightly differently in the L2 (i.e. with all verbs). This would then be akin to Feature Reassembly. Lasnik's proposal is not uncontentious and as proponents of RDH have used data from English learners of French in its favour previously (Hawkins, 2001a) then I am happy to follow their analysis of French and English.

for oral production can be found in tables 5.5 and 5.17. Instances of preverbal adverb placement are low (median=0) in all the groups except the beginner (82/225, 36%, median=7/15) and low-intermediates (50/225, 22%, median=1) and both these groups have a large range (0-14, 0-15). None of the learners who produced a preverbal adverb also produced verb raising with negation and a lexical verb. However, the judgement task (see tables 5.11 & 5.22) does show that some learners (persisting to advanced stages) accept Adv-V orders and V-Neg orders at the same time, i.e. they appear to be raising the verb over negation but not with the adverb. For example the high advanced group accepts post-verbal negation in 110/120 items (92%, median=7/8) and also accepts pre-verbal adverbs in 36/60 items (60%, median=1/4). This disparity between the production and judgement results is difficult to account for given that it only appears in the adverb data. It is possible that these learners permit optionality but as they do not produce it, it may also be an artifact of the judgement task. It is impossible to know, given the nature of this judgement task, why the learners accept pre-verbal adverbs.

These results are suggestive of parameter re-setting given the strong correlation between the different structures associated with verb raising. As such they provide evidence against the Representational Deficit Hypothesis. I will now turn to another theory of development - Feature Reassembly and will examine the results reported in chapter 5 in light of the predictions made by this theory.

6.3.3 Feature Reassembly

Feature Reassembly argues that learners can use the features available in the L1 to permit restructuring of the internal grammar. The features used from the L1 do not have to map directly on to the features of the L2 but rather the features can be 're-assembled' to correspond to the L2 features. The predictions made by Feature Reassembly are given in section 4.4.3 and repeated below.

(6.18) English learners of French will first transfer the verb raising features

from the L1 into the L2. In other words they will only permit verb raising with auxiliaries and modals. Verb raising with auxiliaries and modals will occur with negation. Verb raising will not occur with lexical verbs.

(6.19) Learners will be able to reassemble the verb raising features of English to the French settings. Therefore we would expect to find that when learners raise the verb over negation with lexical verbs, they should also do so with adverbs and vice versa.

Prediction 6.18 argues for transfer from the L1. If the proposal that English has verb raising to IP for auxiliaries, made by Lasnik (2007) and discussed in section 2.2.3, is accepted then we would expect learners to initially to have negation follow auxiliaries but not lexical verbs. The results of the oral production negation task are clear that learners do initially use negation after an auxiliary. Table 5.5 shows that the beginners use 'auxNeg' in 69/225 utterances (31%, median=2/15) and that this falls in the low-intermediates to 25/225 (11%, median=0) and there is a corresponding increase in the use of post-verbal negation. The low-intermediates use post-verbal negation in 44/225 (20%, median=1/15). This is suggestive that learners initially use an auxiliary with negation and then reassemble the features to allow verb raising with lexical verbs. The high-intermediates and advanced groups use post-verbal negation almost exclusively except for occasional instances of *pas* omission. The problem for this account is perhaps the production of Neg-V in the beginners and low-intermediates. The production of Neg-V could be argued to be part of the reassembly process as the learner establishes if French has the same disparity as English between auxiliaries, which raise to IP, and lexical verbs, which do not. It is possible that the learners realize that all verbs behave in the same way in French and part of the re-assembly allows for a period of optionality between raising and non-raising. This is evident in the low-intermediate learners who produce V-Neg in 44/225 (20%, median=1) and also Neg-V in 56/225 (25%, median=1). The judgement

task did not distinguish between the use of auxiliaries with negation and lexical verbs with negation.

Prediction 6.19 claims that learners will be able to reassemble the L1 features into the L2. In discussing prediction 3.116, we have already seen that there is a drop in the use of an auxiliary with negation and a corresponding increase in the use of post-verbal negation. However, the second part of prediction 3.117 argues that we would expect to find that when learners raise the verb with negation, they also do so with adverbs etc. The discussion on the clustering of properties in light of prediction 6.15 made by the Representational Deficit Hypothesis applies here as well. As the correlations in table 5.52 show, all the verb raising structures in oral production cluster together. In fact, the results for verb raising in the grammaticality judgement also correlate although not quite as strongly despite the acceptance of S-Adv-V structures.

After reviewing the predictions made by the three theories examined in chapter 3.3 in light of the results reported in chapter 5, I will now summarize which of these three theories can best account for the developmental data found in this study.

6.3.4 Summary

Three theories of development were tested empirically with instructed English learners of French to examine the development of verb raising in terms of negation, adverbs, object and subject clitics. These theories are Missing Surface Inflection Hypothesis (Prévost and White, 2000), Representational Deficit Hypothesis (Hawkins and Chan, 1997) and Feature Reassembly (Lardiere, 2008). The results show partial support for the Missing Surface Inflection Hypothesis as some learners appear to permit verb raising with non-finite forms. These learners form a small minority and non-finite forms in finite contexts appear to be disallowed with increased proficiency (as measured by years of classroom instruction). Further analysis of the data from the negation and adverb task may provide further evidence for MSIH. The clustering of verb raising with negation,

adverbs, object clitics and subject clitics can be argued to counter the Representational Deficit Hypothesis as re-structuring of the learners' mental grammar appears to have taken place in the oral production data. The judgement data is potentially ambiguous and optionality is evident in the judgement task which is not evident in the oral production task. This clustering of properties also supports the second prediction (3.117) made by Feature Reassembly that learners are able to adopt the L2 feature settings. There is also some evidence from negation that the learners initially use the L1 settings (in this case auxNeg) and then subsequently re-structure to allow all verbs to raise. Therefore, the data presented in chapter 5 appears to be best supported by the predictions made by Feature Reassembly. The evidence from the clustering of structures with verb raising for both oral production and judgement tasks argue for parameter re-setting and against RDH. The data are not conclusive to support or counter MSIH but it appears that some learners do use non-finite verbs in finite contexts and therefore for those learners morphology appears to be dissociated from syntax.

6.4 Implications for syntactic theory

In the previous sections I discussed the results presented in chapter 5 in light of the predictions made by the six SLA theories outlined in chapter 3. In this section, I would like to briefly discuss the implication of these results for some of the syntactic theories outlined in chapter 2. I will discuss the results in light of the proposal by Lasnik (2007) for Minimalism, the arguments by Cinque (1999), Laenzlinger (2002) and Vainikka (2009) for adverbial syntax and how these results support the proposals concerning NegP as an independent projection.

In this thesis I have assumed a UG constrained model in which French and English differ according to a single parameter - verb raising. However, in the section on Minimalism (section 2.2.3) I presented a challenge to this view by Lasnik (2007). Lasnik proposed that English auxiliaries and all verbs in French

are fully specified in the lexicon and check the uninterpretable Tense features overtly, i.e. before Spell-Out. However, English also has bare forms in the lexicon, i.e. lexical verbs, which are checked covertly after Spell-Out. English and French still differ in terms of a single parameter but instead of that parameter being the presence or absence of verb raising, it is the presence or absence of bare forms in the lexicon and the resulting ability to 'derive' these forms after Spell-Out. The negation results for the oral production task show that from the outset L2 learners of French use negation after an auxiliary or copula. Learners then appear to restructure (reassemble) the features specified in the lexicon for auxiliaries to all lexical verbs. This suggests that Lasnik's proposal may be correct. Further work on the use of auxiliaries with adverbs and involving different morphological endings (to check feature specification) is required.

Three proposals for adverbial syntax were outlined in chapter 5.4. Cinque (1999) argued for a fixed universal hierarchy in which adverbs were specifiers to individual functional projections. The order of these projections were fixed universally across languages. This established over 50 functional projections within IP. Laenzlinger (2000, 2002) suggested that these 50+ projections could be collapsed into four based on their semantic distinctions. He also argued for 'low-object scrambling' in both French and English to account for certain adverbs which can appear sentence finally. Vainikka (2009) argued against these fixed projections and argued in favour of an adverb movement account.

The adverb data presented in chapter 5 suggests that sentence final adverbs (part of the 'other' structures mentioned in table 5.17) are common in all the learners and they do not make any semantic distinctions between what can and cannot appear sentence finally. There is a possible task effect in the oral production utterances but similar results are found for the judgement data (see Rogers (2008) for further discussion). The avoidance of sentence internal adverbs by all learners in the production data could provide partial support for the adverb movement account by Vainikka (2009). If Cinque (1999) and Laenzlinger (2002) are correct that there is a fixed universal hierarchy of adverb projections

which project in IP, then we might expect learners to produce high numbers of sentence internal adverbs when they project IP on the grounds of economy, i.e. the learners would not have to perform costly movement operations. The fact that sentence internal adverbs never account for more than 86/225 (38%) of utterances suggests either that a) learners use a movement strategy to avoid putting them internally as they are unsure about verb movement or that b) the underlying position of adverbs is not sentence internal, i.e. not part of IP. The former suggestion is less likely given that learners are able to establish negation (although the high levels of post-verbal negation could be the result of L1 transfer and feature reassembly). If adverbs are not underlying part of IP then either learners may be adjoining adverbs to the end of the sentence or they are base-generated there and undergo movement(Vainikka, 2009). Vainikka's proposal for different movement rules for different classes of adverbs will need to be investigated with additional languages (at the moment it is only developed for English). If it turns out that French and English map adverbs differently into the classes Vainikka proposes then it may account for the apparent delay in the L2 acquisition of sentence internal adverbs.

Finally I would like to argue that the disparity between fast and accurate development of negation and low levels of post-verbal adverbs (indeed any sentence internal adverbs) provides evidence that negation (*pas*) is qualitatively distinct from other adverbs. In chapter 2.4 I discussed Jespersen's cycle for negation in French in which the adverb *pas* had changed from being an adverb to the marker of negation. Rowlett (2007) argues that *pas* is not the specifier of NegP but originates in a lower projection. He suggests this may be an AdvP. The delay between the use of post-verbal negation and post-verbal adverbs is clear in all the groups in the oral production task (see table 5.51. For example, the high-intermediate group produces post-verbal negation in 80% (179/225) of utterances but post-verbal adverbs on only 21% (48/225) of utterances. This dichotomy is mirrored in all the groups, including the native speakers. This suggests that *pas* is clearly distinguishable from other adverbs and I would argue

that it cannot originate in an AdvP but must be part of NegP.[5]

In this chapter I have evaluated the predictions made by the six theories of L2 acquisition that were outlined in chapter 3 in light of the data from 5 groups of instructed L1 English instructed learners of L2 French. I have argued that the results presented in chapter 5 can best be accounted for by postulating Modulated Structure Building for the Initial State and early stages of development (i.e. the building of the syntactic tree) and I have argued that the predictions made by Feature Reassembly are borne out in the data. I have demonstrated that parameter re-setting is possible for English learners of L2 French. I have then further extended my discussion of the results in terms of what they mean for syntactic theory as well as SLA. In the next (and final) chapter, I will briefly summarize my key findings and will consider the limitations and implications of this study.

[5]I accept that NegP may in fact be an 'umbrella' term for several polarity projections but this is outside the present discussion.

Chapter 7

conclusion

In this thesis I set out to examine whether English native speakers learning French as a second language are able to access the same innate mechanisms that constrain first language acquisition. In other words do L2 learners have continued access to the properties of Universal Grammar not instantiated in the L1. In chapter 2 I set out the differences in word order between French and English and followed previous work by Pollock (1989) and Lasnik (2007) that these word order differences are the result of a single parametric variation in verb placement. I presented arguments that utterances with negation, adverbs and object clitics can all provide evidence for potential parameter re-setting.

In chapter 3 I outlined three theories of the Initial State (Full Transfer/Full Access, Organic Grammar and Modulated Structure Building) and three theories of post Initial State development (Missing Surface Inflection Hypothesis, Representational Deficit Hypothesis and Feature Reassembly). Each theory differs in the amount of L1 transfer assumed both at the outset and at different points over time. The theories also differ in terms of whether they believe parameter re-setting is possible. I presented several empirical studies in support of each theory. I elucidated key predictions made by each theory. In chapter 4 I developed these predictions for English learners of French and introduced the methodology used to test between the theories. I tested 5 groups of 15

learners ranging from beginners, aged 12-13 and who had received one year's French instruction, through to final year university undergraduates, aged 21-23 and who had received 11 years of instruction. A group of 10 native speaker controls were also tested. The test battery consisted of two oral production tasks, a comprehension task and an acceptability judgement task. A measure of vocabulary size was also administered as a pre-test.

Chapter 5 presented the results of the study for each of the structures tested (negation, adverbs, object clitics and subject clitics) for each of the groups. I found significant correlations between the oral production tasks and the judgement task but not with the comprehension task. I suggest learners may be processing the comprehension task semantically and not syntactically, hence the lack of correlation. However, learners accepted the same structures they produced indicating that their productions were part of their mental representations and not due to task effects. I also found significant correlations between all the different structures tested indicative of parameter re-setting.

In chapter 6 I evaluated the predictions made by each of the six theories in light of the results presented in chapter 5. I argued that the lack of consistent evidence for IP in the beginner group but the levels of L1 transfer, particularly with adverbs, argued against both Full Transfer/Full Access and Organic Grammar and in favour of Modulated Structure Building. In terms of the post Initial State theories, the clustering of properties counter the predictions made by the Representational Deficit Hypothesis and, I argue, support Feature Reassembly. Evidence for Missing Surface Inflection is insufficient and further analysis is required. I will discuss this in more detail in section 7.1. I also discuss the what the results can tell us about the syntactic theory outlined in chapter 2. I suggest that these results provide tentative support for Lasnik's (2007) proposal that English and French differ in terms of the lexical specification of verbs and that both languages have verb raising. I also argue that the results support the analysis of *pas* as the specifier of an independent NegP and not an AdvP. Finally I tentatively suggest that the low levels of sentence internal adverbs and

concomitant high levels of sentence final adverbs suggest that either learners are adjoining adverbs to the end of the sentence or that for these instructed learners adverbs do not appear to originate in IP. This may support an adverb movement account similar to Vainikka (2009).

These results and discussion should be interpreted with a word of caution and in the next section, I will outline some of the limitations of this study.

7.1 Limitations of this study

There are several limitations to this study that limit its generalizability. The participants are all instructed learners of French and most have also received instruction on another language (e.g. German or Spanish). The effects of explicit instruction are difficult to measure. For example, a review of the textbooks used by the beginner and low-intermediate learners[1] shows that negation is explicitly taught in the first year although this is initially in the form of fixed phrases, such as *je n'aime pas* (I don't like). Unsurprisingly many beginner and some low-intermediate learners made use of such 'chunks' in the oral production task. These were excluded from the study (classified as 'other' in the tables) and hence tokens of negation with lexical verbs is reduced in these groups. Adverbs are rare in the textbooks for the beginners and infrequent in those for the low-intermediates. It is not surprising therefore that these groups perform less well with adverbs than negation and the difficulty of adverb placement is not due to a difficulty with adverbs syntactically but rather a lack of exposure in the input. The issue of input is another factor which may limit this study. Teachers were not observed in their lessons[2] and so I cannot be certain how much target French the learners were exposed to. Also the teachers were all non-native speakers of French.

Aside from the issue of instruction, there are some methodological issues

[1]Teachers used Metro, Expo and some Tricolore books.

[2]Some teachers were former colleagues and I am confident that they use the target language almost exclusively. Teachers do not use the target language for discipline or explicit grammar instruction.

which limit this study. The pre-test was not fine-grained enough to distinguish between the groups and a more general measure of proficiency would have been better. The oral production tasks did not require the learners to give all the possible utterances for each item. It would not have been practical given the numbers involved. However, the oral production tasks cannot therefore tell us if learners also permit alternative structures. For example, in the oral production adverb task many learners produced the adverb at the end of the sentence. We do not know if they can also produce it sentence internally and if so where in the sentence (i.e. before or after the verb). The comprehension and judgement tasks were included to mitigate this limitation and were generally successful. However, in the comprehension task there remains the possibility that learners process the sentence semantically rather than syntactically, limiting its generalizability.

For reasons of space, the results were only presented in terms of the groups. Reference was made to individual results when particularly pertinent but a fuller analysis of the individual variation within the groups would be desirable.

Finally, testing of the Missing Surface Inflection Hypothesis was limited by the decision to analyze the object clitics oral production task for the use of subject clitics. This decision was reached because subject clitics were more felicitous as subjects in the object clitic task rather than the negation and adverbs task. In retrospect, however, this meant that analysis could not be undertaken to see if the learners are using non-finite verbs in verb raising contexts, i.e. do the learners produce *elle ne regarder (INF) pas la télé.* This analysis will be undertaken in future work.

7.2 Implications for SLA

Despite the limitations of this study, there are some clear implications for the field of second language acquisition. This study tested 5 groups of learners cross-sectionally at different points in development. The learners all performed the same tasks which included oral production, comprehension and judgement tasks.

This allowed for the same issue (verb movement) to be examined from several different ways. As I used the data from the judgement task to help disambiguate some analyses of the oral production task, this study clearly shows the benefits of using multiple measures to test a particular phenomena. The scope of this study, both in terms of tasks and participants, allowed the six theories of acquisition outlined in chapter 3 to be empirically tested.

The principle conclusions of this thesis are:

- L2 acquisition is UG constrained,
- parameter re-setting is possible,
- learners build up their syntactic representations from the VP in a gradual fashion,
- there is influence from the L1 at each stage.

7.3 Directions for future research

This thesis suggests several areas for further investigation. The results from the adverb tasks clearly show a need for a clear theory of adverbial syntax, which can account for the variety of surface positions cross-linguistically. Methodologically, this study highlights a clear need in the field of SLA for a standardized measurement of global proficiency for French so that the results of this study can easily be compared with those from other learners. I am particularly interested in examining the within group variability found for many of the oral production utterances. This thesis concentrated on the acquisition of verb raising and therefore structures which were produced which did not inform on verb raising were collapsed into 'other' categories. I would like to examine these 'other' utterances to further examine how learners (particularly at the early stages) are using French.

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Appendices

Appendix A

Pre-test: x-lex

In this appendix, the three versions of the x-lex vocabulary measure are given. X-lex was developed by Meara and Milton (2003).

Name: _____

French X-Lex 1

Please look at these words. Some of these words are real French words and some are invented but are made to look like real words. Please tick the words that you know or can use. Here is an example:

chien ✓

abjecter	
accomplir	
accrocher	
adjudant	
admettre	
air	
animation	
arguable	
auditoire	
aussitôt	
avancé	
bataille	
bouche	
brouillard	
brûlé	
buffle	
cache	
causer	
centaine	
clair	
classer	
collaborateur	
complexe	
comtesse	

connu	
contemporain	
contribuable	
crétale	
déchirer	
défaulter	
défaut	
dessus	
devenir	
diroir	
disabilité	
disparition	
docteur	
dont	
dour	
écourt	
élaboration	
eltrisse	
élu	
entrance	
épanouir	
époque	
éther	
euplain	

expecter	
fatiguer	
formirique	
formuler	
fronce	
gestide	
grillage	
grouper	
habileté	
habillé	
habiller	
inconnu	
innocent	
intégral	
jerette	
judiciaire	
lendemain	
lifrer	
malgré	
malin	
marché	
métro	
metteur	
modéré	

montage	
muscle	
nadoir	
négliger	
nuit	
octobre	
odeur	
originaire	
oui	
paire	
pareil	
pastoral	
peser	
plage	
précipiter	
précont	
progresser	
proximité	
que	
radio	
rare	
reduction	
réduit	
régir	

remise	
rendement	
requête	
retrait	
revue	
saison	
sauvegarder	
signal	
signard	
silhouette	
soi	
spécialiser	
tante	
tasse	
terrestre	
tirôt	
toit	
ton	
véritablement	
vernis	
vieillesse	
vigoureux	
ville	
vol	

Thank you for your help.

Name: _____

French X-Lex 2

Please look at these words. Some of these words are real French words and some are invented but are made to look like real words. Please tick the words that you know or can use. Here is an example:

chien ✓

accélérer	
actuellement	
âge	
agent	
amiral	
anglais	
angoisse	
ascenseur	
atrâte	
avenue	
barbe	
bavarder	
bientôt	
border	
célébrité	
chaire	
chaque	
charge	
chasse	
concurrent	
coude	
courant	
cravate	
creuser	

débarrasser	
debout	
décoration	
détenir	
différemment	
distinction	
divorce	
élimination	
empire	
entrée	
étiquette	
extrêmement	
faible	
fameux	
faveur	
fils	
fin	
fleuve	
fonctionner	
formule	
fort	
fragment	
froise	
fronter	

fureur	
gant	
garmente	
giste	
grasper	
hautement	
immeuble	
inconcevable	
inspirer	
insuffisant	
intéressé	
je	
joyance	
lever	
liabilité	
liste	
litéracie	
logique	
lucide	
luvois	
malignant	
mélange	
menace	
mentir	

mériter	
miel	
ministeur	
mise	
mouiller	
naçon	
observation	
ouest	
outrir	
paquet	
pardon	
passé	
pédiment	
perce	
permissable	
piédeur	
pneu	
pochoir	
presse	
prévieux	
prévoir	
procédure	
proclamer	
prudence	

psychologie	
purement	
raser	
récolter	
remporter	
revenir	
revoir	
ruelle	
sécurité	
sien	
soupaire	
substance	
succession	
suprême	
taureau	
taverne	
temps	
teneur	
tenture	
transformer	
triparoix	
tumeur	
ultime	
vernis	

Thank you for your help.

Name: _____

French X-Lex 3

Please look at these words. Some of these words are real French words and some are invented but are made to look like real words. Please tick the words that you know or can use. Here is an example:

chien ✓

abattre	
absurde	
achevé	
acteur	
agiter	
aile	
analogie	
antiquité	
aperne	
argument	
attachement	
aussi	
baisser	
baser	
bombe	
brigeable	
catégorie	
coiffé	
congruence	
consommateur	
contrôle	
coutume	
cracher	
de	

débrouiller	
début	
défi	
déplacement	
distance	
divers	
domestique	
douter	
entamer	
entretenir	
entrevue	
équipage	
équivaloir	
étoile	
étonné	
existence	
exploiter	
financement	
financer	
futur	
genre	
gillais	
guérir	
habitation	

houroux	
indignation	
insecte	
intellectuel	
introis	
jamais	
juré	
lame	
lassitude	
lequel	
localement	
long	
manchir	
maximum	
objection	
opportun	
oreille	
outil	
panneau	
participer	
pelouse	
pistolet	
plusieurs	
porvent	

possibilité	
pot	
pourcent	
prêcher	
procédé	
provocatif	
publication	
quantité	
réflexe	
regarder	
reparlance	
rescuer	
résistance	
résolution	
respect	
révéler	
salarié	
satisfactoire	
séduire	
serpent	
sième	
slendre	
solide	
solution	

sonde	
soudain	
soupçon	
source	
spécialement	
spirité	
sportif	
statutorie	
structure	
style	
survivre	
talenté	
taxi	
teinte	
touceul	
tournée	
trésor	
tromper	
ultimation	
valve	
vernique	
vicinité	
voler	
voulu	

Thank you for your help.

Appendix B

Oral Production: negation & adverbs task

Thss appendix contains the images used to elicit negation and adverbs in the oral production task. At the bottom of each image, I have added a caption with the target sentence to be elicited. Obviously this was not on the original test item.

Contents:

- List of all the target sentences by structure.
- 10 negation only items
- 5 negation and adverb items
- 10 adverb only items
- 5 distractors

Oral production task: target sentences by structure (negation/adverb)

Negation

1. Elle ne se brosse pas les dents.
2. Elle ne lit pas le journal.
3. Elle ne joue pas sur l'ordinateur.
4. Elle ne joue pas au golf.
5. Il n'attend pas le bus.
6. Elle ne va pas à la pêche.
7. Il ne fait pas ses devoirs.
8. Il ne boit pas de l'eau.
9. Il ne se lève pas.
10. Il ne fume pas.

Negation and adverbs

11. Il ne fait pas souvent du vélo.
12. Il ne joue pas régulièrement de la guitarre.
13. Ils ne lavent pas complètement la voiture.
14. Il ne répare pas souvent la voiture.
15. Il ne prend pas fréquemment le bus.

Adverbs

16. Elle fait encore du shopping.
17. Elle lave souvent le chien.
18. Il prend très souvent une douche.
19. Elle fait encore de la natation.
20. Elle écoute régulièrement de la musique.
21. Elle regarde souvent la télé.
22. Il se lave toujours les mains.
23. Il parle rarement au telephone.
24. Il rentre lentement à la maison.
25. Il lit encore un livre.

Distractors

26. Il tombe par terre.
27. Il danse.
28. Ils font du jogging.
29. Il pleure.
30. Ils jouent aux cartes.

10 negation only items (continued on next page)

Target: Elle ne se brosse pas les dents

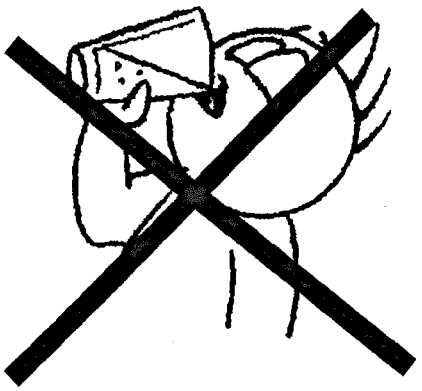
Target: Elle ne va pas à la pêche

Target: Elle ne joue pas sur l'ordinateur

Target: Elle ne lit pas le journal.

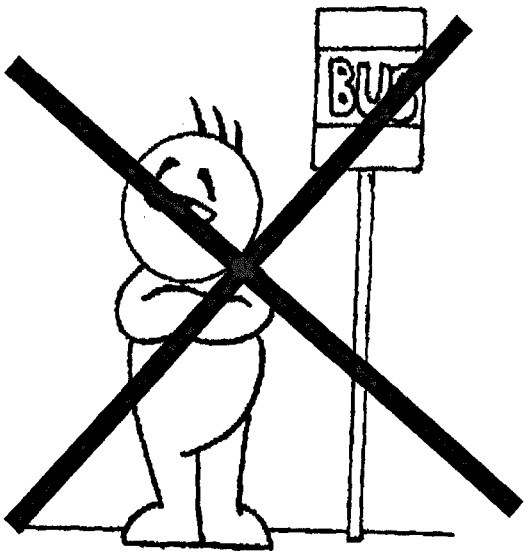
Target: Elle ne joue pas au golf.

10 negation only items (continued)

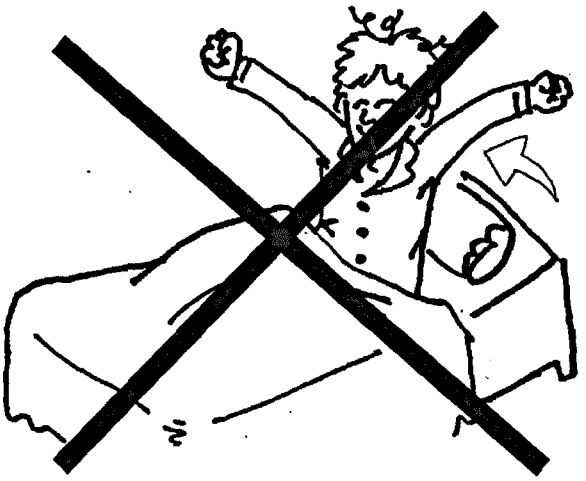


Target: Il ne boit pas de l'eau.

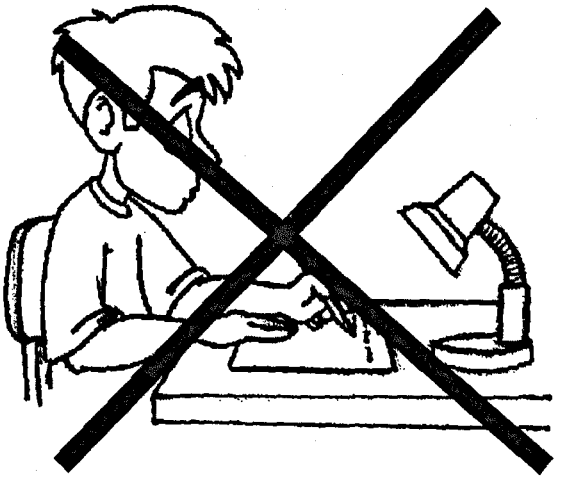
Target: Il ne fume pas.



Target : Il n'attend pas le bus.



Target : Il ne se lève pas



Target : Il ne fait pas ses devoirs.

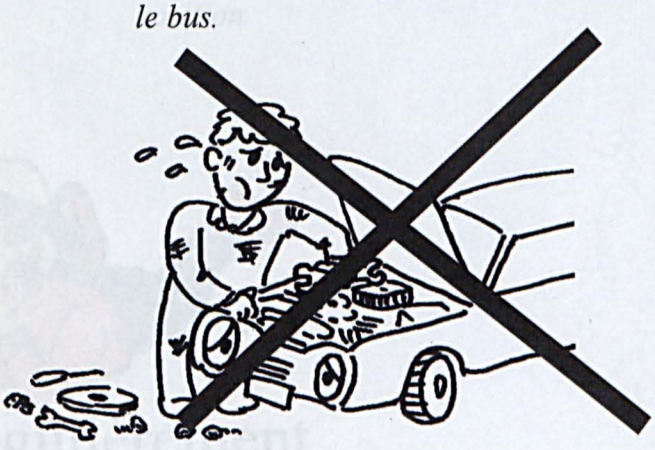
5 negation and adverb items

Target: Il ne fait pas souvent du vélo.

Target: Il ne joue pas régulièrement de la guitare.

Target: Ils ne lavent pas complètement la voiture.

Target: Il ne prend pas fréquemment le bus.



Target: Il ne répare pas souvent la voiture.

10 adverb only items (continued on next page)

Encore

Target: Elle fait encore du shopping.

Souvent

Target: Elle lave souvent du chien.

Très souvent

Target: Il prend très souvent une douche.

encore

Target: Elle fait encore de la natation.

Régulièrement

Target: Elle écoute régulièrement de la musique.

10 adverb only items (continued)

Toujours

Target: Il se lave toujours les mains.

rarement

Target: Il parle rarement au téléphone.

lentement

Target: Il rentre lentement à la maison.

Souvent

Target: Elle regarde souvent la télé.

Encore

Target: Il lit encore un livre.

5 distractors items

Target: Il tombe par terre.

Target: Il danse.

Target: Ils font du jogging.

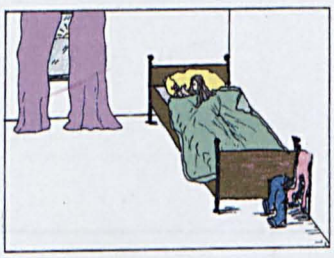
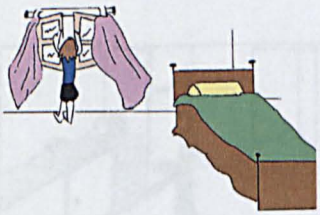
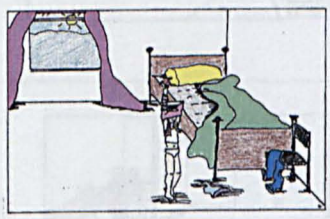
Target: Il pleure.

Target: Ils jouent aux cartes.

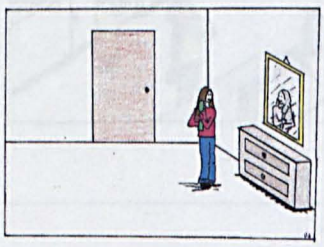
Appendix C

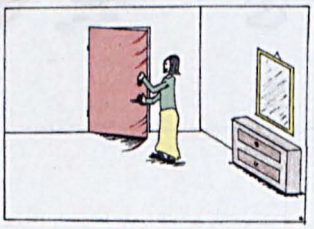
Oral Production: object clitic task

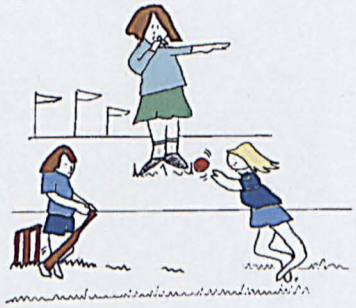
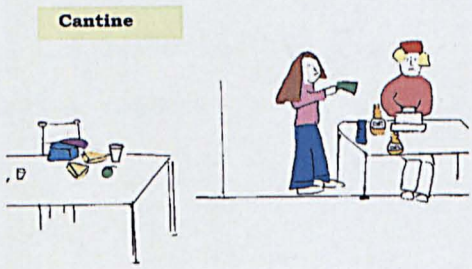
In this appendix, a table with the picture that the learner saw is given in one column and the script that the researcher read is given in the other column. This task is modified from Grüter (2005).

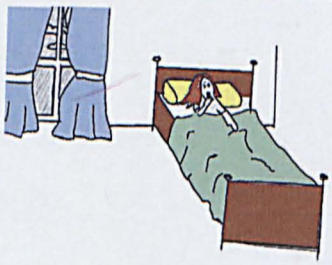
Picture 1 La petite fille s'appelle Marie. Qu'est-ce que Marie fait ? Target: Elle dort.	
Picture 2 C'est le matin. Marie se réveille. Et qu'est-ce que Marie fait là? Target: Elle se lève.	
Picture 3 Marie va à la fenêtre. Qu'est-ce que elle fait avec la fenêtre? Target: Elle l'ouvre.	
Picture 4 Et là, qu'est-ce qu'elle fait? Target: Elle s'habille.	
Picture 5 Marie a fini de s'habiller. Elle va manger son petit déjeuner. Ici c'est la maman de Marie. Qu'est-ce que la maman tient dans sa main? Target: elle a une tasse de café. *- only ask this next question if they don't*	

already say une tasse de café or similar? (Et tu penses qu'il y a quoi dans la tasse?) Et qu'est-ce que la maman fait avec le café/le jus? Target: elle le boit.	
Picture 6 Ensuite, Marie s'assoit. Elle a des céréales dans son assiette. Et qu'est-ce que Marie fait avec ses céréales? Target: Elle les mange.	
Picture 7 Marie a fini de manger. Marie amène son assiette dans l'évier.	
Picture 8 Et qu'est-ce que Marie fait avec son assiette? Target: Elle la lave.	
Picture 9 Regarde ce qui s'est passé! Marie casse son assiette. Marie a de la peine, elle pleure. Qu'est-ce qu'il se passe à son doigt? Target: Elle se coupe/ elle se blesse	

Qu'est-ce que tu penses que la maman va dire? Target: Tu es stupide!	
Picture 10 Regarde là, qu'est-ce que la maman fait? Target: Elle la console. Oui, et elle lui dit que ce n'est pas grave.	
Picture 11 Regarde, Marie s'en va. Ici, qu'est-ce que la maman fait avec l'assiette cassée? Target: elle la range.	
Picture 12 Regarde où est Marie! Elle est en face du miroir. Qu'est-ce qu'elle fait avec ses cheveux? Target: elle les brosse.	
Picture 13 La maman commence à préparer le déjeuner de Marie. Là je crois qu'elle fait un sandwich.	

Picture 14 Regarde ce qu'elle tient dans les mains: un couteau! Et qu'est-ce qu'elle fait avec le pain? Target: elle le beurre/coupe.	
Picture 15 Marie est revenue! La maman a fini de préparer le déjeuner de Marie. La maman a mis le déjeuner de Marie dans sa boîte à sandwichs. Qu'est-ce que la maman fait avec la boîte à sandwichs? Target: elle la donne à Marie.	
Picture 16 Et qu'est-ce que Marie fait avec sa boîte à sandwichs? Target: elle la met dans son sac.	
Picture 17 Ensuite, Marie va à l'école. Que fait la maman? Target: elle dit au revoir.	
Picture 18 Quand Marie est loin, Qu'est-ce que la maman fait avec la	

porte? Target: elle la ferme.	
Picture 19 Marie est en classe. Elle parle avec ses amis. Qu'est-ce que la prof dit? Target: elle dit 'silence'.	
Picture 20 Marie fait le sport, Aujourd'hui ils jouent au cricket. Qu'est-ce que Marie fait avec la balle ? Target: elle la lance.	
Picture 21 Marie a faim. Elle va à la cantine. Elle a son sandwich mais elle veut boire quelque chose. Elle prend les bouteilles d'Orangina à la caisse. Qu'est-ce qu'elle fait avec l'Orangina ? Target: Elle l'achète.	
Picture 22 Marie est retournée chez elle. Elle aide sa mère. Sa chambre est en désordre. Qu'est-ce que Marie fait dans sa chambre ?	

Target: Elle la range.	
Picture 23 Il est très tard. Marie est fatiguée. Qu'est-ce qu'elle fait ? Target: elle se couche	

Appendix D

Comprehension task

This appendix includes:

- List of test sentences by structure.
- Comprehension test answer sheet.
- Copy of powerpoint slides. The pictures have been reduced slightly to allow for the caption with the sentence the learners heard.

Comprehension task sentences by structure

Negation

1. Il n'a pas de cheveux blonds.
2. Il ne mange pas à la cantine.
3. Il ne joue pas au foot.
4. Il ne porte pas son manteau.
5. Il n'est pas malade.
6. Elle n'ouvre pas la porte.
7. Elle ne fait pas la cuisine.
8. Elle ne trouve pas son parapluie.
9. Elle n'a pas de fourchette.
10. Elle ne parle pas français.

Adverbs

11. Elle construit encore un château
12. Elle fait rapidement ses devoirs.
13. Elle joue souvent au tennis.
14. Elle mange lentement son gateau.
15. Elle mange toujours du pain avec de la confiture.
16. Il mange encore une pomme.
17. Il nettoie rapidement la salle.
18. Il porte toujours un chapeau.
19. Il rentre lentement à la maison.
20. Il va souvent au cinéma.

Object clitics

21. Elle la brûle.
22. elle le monte sur le rocher.
23. elle la souffle
24. elle le rentre à la maison.
25. elle les descend du train
26. il l'attend à la gare.
27. il la dessine avec un crayon.
28. il le plonge dans l'eau
29. il le sort tous les soirs.
30. il les chasse dans la forêt.

Full DP object

31. Elle brûle la maison.
32. Il sort le chien tous les soirs.
33. Il dessine la chaise avec un crayon.
34. Elle souffle la bougie.
35. Il attend la femme à la gare.

No object

36. elle descend du train
37. il plonge dans l'eau
38. elle monte sur le rocher
39. elle rentre à la maison
40. il chasse dans la forêt

Name:_____

Comprehension task

In this task you will hear a native French speaker reading some sentences. She will read each sentence once, pause and then repeat it. You will also see two pictures on the screen. You have to decide which picture matches the sentence you hear. Tick the box beside the correct picture.

Try one first as an example!

Example:
A B

Let's begin! There are 40 items on this task. It is important that you answer them all.

1. A B
2. A B
3. A B
4. A B
5. A B
6. A B
7. A B
8. A B
9. A B
10. A B
11. A B
12. A B
13. A B
14. A B
15. A B
16. A B
17. A B
18. A B
19. A B
20. A B
21. A B
22. A B
23. A B
24. A B
25. A B
26. A B
27. A B
28. A B
29. A B
30. A B
31. A B
32. A B
33. A B
34. A B
35. A B
36. A B
37. A B
38. A B
39. A B
40. A B

Instructions

- You will hear a French person reading a sentence.
- You will see two pictures labelled A and B.
- Choose which picture matches the sentence you hear.
- Circle A or B on your sheet.
- Let's do one as an example first.

Example

A

Example

B

1. Il ne joue pas au foot.

A

B

2. Il sort le chien tous les soirs.

A

B

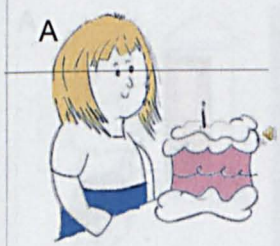
3. Il ne porte pas son manteau.

A

B

4. Elle souffle la bougie.

A



B

5. Elle le monte sur le rocher.

A

B

6. IL attend la femme à la gare.

A

B

7. Il le sort tous les soirs.

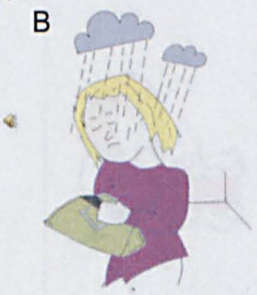
A

B

8. Elle ne trouve pas son parapluie.

A

B



9. Elle mange toujours du pain avec de la confiture.

A

B

10. Elle rentre à la maison.

A

B

11. Il le plonge dans l'eau.

A

B

12. Il dessine la chaise avec un crayon.

A

B

13. Il nettoie rapidement la salle.

A

B

14. Elle la souffle.

A

B

15. Elle descend du train.

A

B

16. Elle monte sur le rocher.

A

B

17. Elle ne parle pas français.

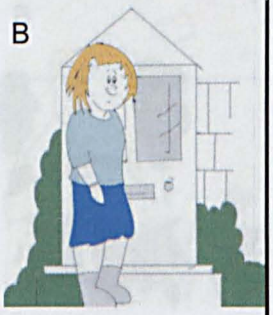
A

B

18. Elle n'ouvre pas la porte.

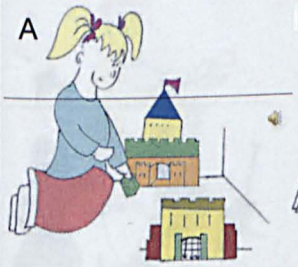
A

B

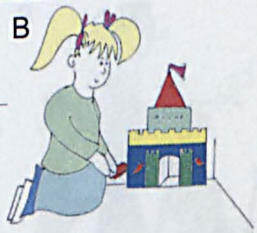


19. Elle construit encore un château.

A

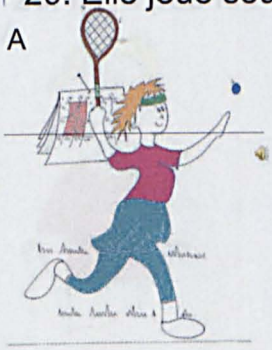


B



20. Elle joue souvent au tennis.

A

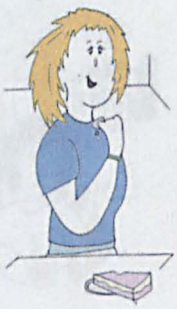


B

21. Elle mange lentement son gâteau.

A

B



22. Elle ne fait pas la cuisine.

A

B

23. Elle brûle la maison.

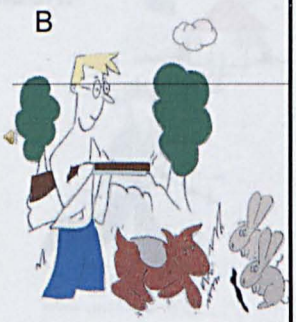
A

B

24. Il les chasse dans la forêt.

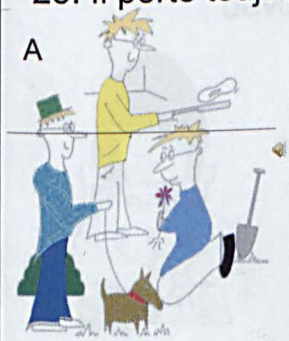
A

B



25. Il porte toujours un chapeau.

A



B

26. Il n'a pas les cheveux blonds.

A

B

27. Elle la brûle.

A

B

28. Il la dessine avec un crayon.

A

B

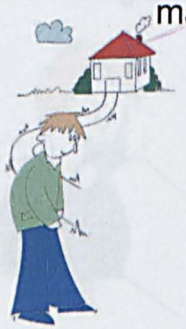
29. Elle les descend du train.

A

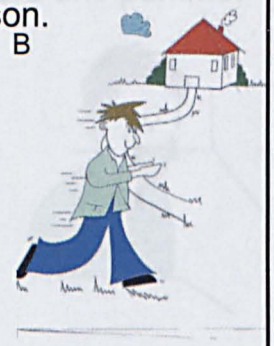
B

30. IL rentre lentement à la maison.

A



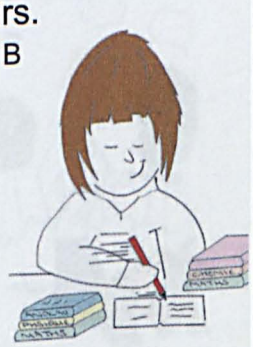
B



31. Elle fait rapidement ses devoirs.

A

B



32. Il n'est pas malade.

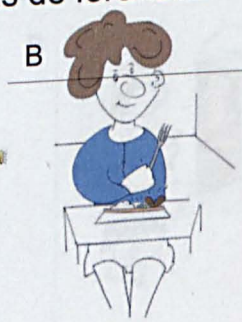
A

B

33. Elle n'a pas de forchette.

A

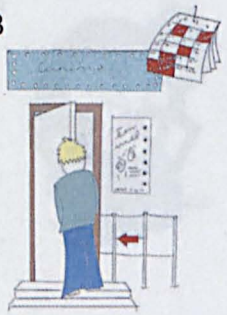
B



34. Il va souvent au cinéma.

A

B



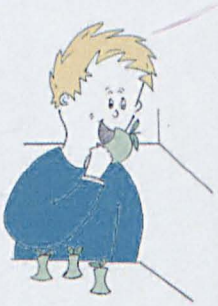
35. Il plonge dans l'eau.

A

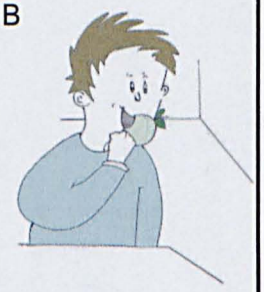
B

36. Il mange encore une pomme.

A



B



37. Il chasse dans la forêt.

A

B

38. Il l'attend à la gare.

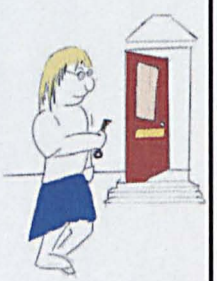
A

B

39. Elle le rentre à la maison.

A

B



40. Il ne mange pas à la cantine.

A

B

Appendix E

Acceptability Judgement task

Contents:

- Table of all the sentences in the judgement task by structure.
- Acceptability Judgement task administered to participants. For the native speakers the instructions were translated into French.

	Grammatical		Ungrammatical	
	Clitic subject	DP subject	Clitic subject	DP subject
Negation	Elle n'écrit pas une lettre. Il ne fait pas de la natation. Elle ne prend pas le bus. Il ne porte pas son manteau.	La fille ne sort pas les poubelles. Le garçon ne porte pas une jupe. La fille ne trouve pas son parapluie. Le garçon ne va pas au cinéma.	Elle ne pas ouvre la porte. Il ne pas attend à la gare. Elle ne mange du gâteau. Il ne coupe le sandwich.	La femme ne pas parle au téléphone. L'homme ne pas écrit une lettre. La fille ne parle français. Le garçon ne fait la cuisine.
Adverb	Elle dessine encore un château. Il rentre lentement à la maison. Elle joue au foot régulièrement. Il va au cinéma fréquemment. Elle lave rarement le chien. Il fait souvent du vélo.	Le garçon prend le bus fréquemment. L'homme rentre à la maison lentement. La fille fait toujours de la natation. Le garçon va souvent au cinéma. La fille joue souvent de la guitare. La fille lit toujours le journal.	Encore elle mange une pomme. Toujours il regarde la télé. Il sort les poubelles encore. Elle fait de la natation toujours. Il toujours parle au téléphone. Elle souvent répare la voiture.	Le garçon dessine un château encore. La femme mange des frites toujours. Souvent le garçon fait du vélo. Lentement la femme rentre à la maison. Le garçon souvent lit le livre. La fille fréquemment va au cinéma.
Subject clitic	Il joue au tennis. Elle fait ses devoirs.	La fille joue au tennis. Le garçon fait ses devoirs.	Il jouer au tennis. Elle faire ses devoirs.	La fille jouer au tennis. Le garçon faire ses devoirs.
Object clitic	Elle la lave le matin. Il le fait chaque jour. Elle mange le pain avec de la confiture. Il met la clé dans son sac.	La fille le mange avec de la confiture. Le garçon la donne à Marie. Marie lave la voiture le samedi. Marc fait ses devoirs dans sa chambre.	Il lave le le samedi. Elle achète le dans un magasin. Il met dans son sac. Elle donne à Marie.	Le garçon mange le avec de la confiture. La fille fait le chaque jour. Le garçon mange avec du beurre. La fille lave le samedi.

Name/Student ID:_____

Instructions :

- In English you have a feeling if a sentence is a good sentence of English or not. For example,
  - "He wash the car" you would probably say is not a good sentence.
  - "He washes the car" you would probably say is a good sentence.
- Sometimes you have the same feeling about sentences in French.
- Read the list of sentences.
- You must decide if the sentence is a very good, good, bad or very bad sentence of French.
- Underline or circle your answer on the right and side.
- Try to do this quickly without thinking about things you have learnt in class too much. I want to get you immediate impression.
- If you really don't know then underline "don't know" but please try to avoid this.

1. Il ne fait pas de la natation.	very good / good/ bad / very bad / don't know
2. Elle ne prend pas le bus.	very good / good/ bad / very bad / don't know
3. La fille ne trouve pas son parapluie.	very good / good/ bad / very bad / don't know
4. Le garçon va souvent au cinéma.	very good / good/ bad / very bad / don't know
5. La fille ne parle français.	very good / good/ bad / very bad / don't know
6. Il met dans son sac.	very good / good/ bad / very bad / don't know
7. Il lave le le samedi.	very good / good/ bad / very bad / don't know
8. Elle n'écrit pas une lettre.	very good / good/ bad / very bad / don't know
9. Il rentre lentement à la maison.	very good / good/ bad / very bad / don't know
10. Elle lave rarement le chien.	very good / good/ bad / very bad / don't know
11. Elle joue au foot régulièrement.	very good / good/ bad / very bad / don't know
12. Le garçon faire ses devoirs.	very good / good/ bad / very bad / don't know
13. La fille fréquemment va au cinéma.	very good / good/ bad / very bad / don't know
14. Elle donne à Marie.	very good / good/ bad / very bad / don't know
15. Le garçon mange le avec de la confiture.	very good / good/ bad / very bad / don't know
16. Le garçon fait ses devoirs.	very good / good/ bad / very bad / don't know
17. Il jouer au tennis.	very good / good/ bad / very bad / don't know
18. La fille fait toujours de la natation.	very good / good/ bad / very bad / don't know
19. Elle faire ses devoirs.	very good / good/ bad / very bad / don't know
20. Elle souvent répare la voiture.	very good / good/ bad / very bad / don't know
21. La fille joue au tennis.	very good / good/ bad / very bad / don't know
22. Le garçon la donne à Marie.	very good / good/ bad / very bad / don't know
23. Souvent le garçon fait du vélo.	very good / good/ bad / very bad / don't know
24. Elle ne pas ouvre la porte.	very good / good/ bad / very bad / don't know
25. Il ne coupe le sandwich.	very good / good/ bad / very bad / don't know
26. Toujours il regarde la télé.	very good / good/ bad / very bad / don't know
27. L'homme rentre à la maison lentement.	very good / good/ bad / very bad / don't know

Name/Student ID:_____

28. Le garçon souvent lit le livre. very good / good/ bad / very bad / don't know
29. Elle la lave le matin. very good / good/ bad / very bad / don't know
30. Il sort les poubelles encore. very good / good/ bad / very bad / don't know
31. La fille fait le chaque jour. very good / good/ bad / very bad / don't know
32. La fille lit toujours le journal. very good / good/ bad / very bad / don't know
33. La fille joue souvent de la guitare. very good / good/ bad / very bad / don't know
34. Il joue au tennis. very good / good/ bad / very bad / don't know
35. Il ne porte pas son manteau. very good / good/ bad / very bad / don't know
36. L'homme ne pas écrit une lettre. very good / good/ bad / very bad / don't know
37. Il ne pas attend à la gare. very good / good/ bad / very bad / don't know
38. Le garçon dessine un château encore. very good / good/ bad / very bad / don't know
39. Encore elle mange une pomme. very good / good/ bad / very bad / don't know
40. Elle fait ses devoirs. very good / good/ bad / very bad / don't know
41. Il le fait chaque jour. very good / good/ bad / very bad / don't know
42. Il fait souvent du vélo. very good / good/ bad / very bad / don't know
43. La femme ne pas parle au téléphone. very good / good/ bad / very bad / don't know
44. Il toujours parle au téléphone. very good / good/ bad / very bad / don't know
45. Il va au cinéma fréquemment. very good / good/ bad / very bad / don't know
46. Marie lave la voiture le samedi. very good / good/ bad / very bad / don't know
47. Elle fait de la natation toujours. very good / good/ bad / very bad / don't know
48. La fille le mange avec de la confiture. very good / good/ bad / very bad / don't know
49. La fille ne sort pas les poubelles. very good / good/ bad / very bad / don't know
50. Le garçon ne va pas au cinéma. very good / good/ bad / very bad / don't know
51. Le garçon ne porte pas une jupe. very good / good/ bad / very bad / don't know
52. Le garçon mange avec du beurre. very good / good/ bad / very bad / don't know
53. Elle ne mange du gâteau. very good / good/ bad / very bad / don't know
54. La femme mange des frites toujours. very good / good/ bad / very bad / don't know
55. La fille jouer au tennis. very good / good/ bad / very bad / don't know
56. Elle mange le pain avec de la confiture. very good / good/ bad / very bad / don't know
57. La fille lave le samedi. very good / good/ bad / very bad / don't know
58. Elle dessine encore un château. very good / good/ bad / very bad / don't know
59. Le garçon prend le bus fréquemment. very good / good/ bad / very bad / don't know
60. Le garçon ne fait la cuisine. very good / good/ bad / very bad / don't know
61. Elle achète le dans un magasin. very good / good/ bad / very bad / don't know
62. Marc fait ses devoirs dans sa chambre. very good / good/ bad / very bad / don't know
63. Il met la clé dans son sac. very good / good/ bad / very bad / don't know
64. Lentement la femme rentre à la maison. very good / good/ bad / very bad / don't know

Appendix F

Consent form

This appendix contains a copy of the consent form given to all participants.

CONSENT TO USE DATA COLLECTED DURING THE TASKS

Research project: Syntactic development in second language learners of French

Funding council: Arts and Humanities Research Council
(Ref: SA2005/120142)

Research Insititution: University of Newcastle

Researcher: Mrs Vivienne Rogers (supervisor: Prof F. Myles)

Contact telephone number: 07973662705 or 01912223909 (answerphone)
Email: vivienne.rogers@newcastle.ac.uk

I hereby agree to participate in the above research project which aims to investigate the linguistic development of classroom learners of French. My involvement will consist in taking part in a range of 5 tasks including two oral tasks which will be audiorecorded and transcribed. All the data that I provide, including sound files and transcripts, will be anonymised, with all references to proper nouns (i.e. identifying people, places or institutions) being removed.

I understand that I can withdraw my consent at any time by contacting the researcher.

I give my permission for the data which I will provide for the above project to be used for research purposes only (including research publications, reports, seminars). I understand that the data will be stored on a database of oral learner French collected by the universities of Newcastle and Southampton (the FLLOC project www.flloc.soton.ac.uk). It will be available for use by other researchers for an indefinite period.

I hereby assign the copyright of my contribution to the research project team.

Student Name:..... School:.....

Signed:..... Date:.....
(student)

Signed:..... Date:.....
(Parent/Guardian)

Signed:...V.Rogers..... Date:...26/03/07.....
(Researcher)

Appendix G

Background Questionnaire

This appendix contains a copy of the background questionnaire given to the low-intermediate group. Other groups were also asked for their exam grades.

Student ID or name: _____

1. Can you use any language(s) other than English and French (apart from ones you are learning or have learnt at school)?

   Yes ☐ No ☐ (go to question 2)

   If yes, which one(s):

   _____

   _____

   How regularly do you use this/these other language(s)?

   _____

   _____

2. What other foreign language(s) are you learning (apart from French)?

   If you are learning only French, go to question 4.

   Language 1: _____

   Language 2: _____

   Language 3: _____

3. How long have you studied them for?

   Language 1: _____

   Language 2: _____

   Language 3: _____

4. What is your date of birth?

   _____

5. What sex are you?

   F ☐ M ☐

6. When did you start learning French?

   _____

7. What grade do you think you will get for GCSE French?

   _____

8. Do you think you will be taking French next year?

   _____